Appendix A-4 Talent Training Plan of Energy Engineering Program

Talent Training Plan of Industrial Design Program

1 Objectives

The program is guided by the core socialist values and Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era. It fully embodies the Party's educational policies, focusing on moral education, integrating ideology and politics, and emphasizing the holistic development of morality, intelligence, physical fitness, aesthetics, and labor skills. The program aims to nurture individuals with a high level of cultural literacy and a strong sense of social responsibility. Graduates will have a solid foundation in industrial design knowledge and proficiency in design thinking, expression, communication, and management skills. Upon completion of the program, graduates will be prepared to engage in design research and development, engineering applications, production management, technical services, and other roles in the field of industrial design and related interdisciplinary fields. They will be particularly well-suited for careers in transportation vehicles, intelligent commercial kitchens, and intelligent homes. Graduates are expected to uphold the values of labor and selfless dedication, demonstrate entrepreneurial abilities, and adapt to the requirements of China's socialist modernization construction. By possessing these qualities, graduates will be well-equipped to contribute to the great task of national rejuvenation as high-quality engineering application-oriented professionals.

2 Features

The program is closely aligned with the development and demands of the industrial design industry, aiming to cultivate patriotic and dedicated engineering application-oriented talents with interdisciplinary and industry-academic integration characteristics. The program offers three specific professional training directions: Transportation Vehicle Design, Intelligent Commercial Kitchen Engineering, and Intelligent Home Design.

Transportation Vehicle Design Direction: This direction integrates resources from disciplines like mechanics, electronics, automotive engineering, rail transportation, and aviation. It focuses on transportation vehicle styling design, digital cockpit design, high-end aviation equipment design, and related intelligent sustainable product design, emphasizing practical teaching elements. Students are trained to utilize design innovation methods and smart technologies to enhance their comprehensive design abilities for transportation vehicle products.

Intelligent Commercial Kitchen Engineering Direction: Centered on the design and development of Intelligent Commercial Kitchen, this direction combines disciplines such as mechanics, materials, and design. By integrating classroom teaching with market-specific projects, students develop systematic design capabilities for intelligent commercial kitchen design, including product design, interior design, construction technology, and industry standards.

Intelligent Home Design Direction: This direction focuses on the design and development of Intelligent home environments and facilities under the Internet of Things (IoT) background. By integrating disciplines such as mechanics, electronics, materials, artificial intelligence, and design, students develope systematic design capabilities for intelligent home design, including product design, interior design, display design, construction technology, and digital scenario applications. The program emphasizes practical teaching elements and the integration of classroom teaching with market-specific projects to ensure students are well-versed in the development and market demands of the intelligent home industry.

3 Graduation Requirements

Students should possess comprehensive talent profile integrating knowledge, abilities, and qualities, and should demonstrate a sense of social responsibility towards contributing to the prosperity of the nation and the revitalization of the country. They should embody the spirit of excellence, the craftsmanship of a great nation, as well as a sense of patriotism and a commitment to designing for the nation.

3.1 Knowledge Criterion

Engineering Knowledge: Master the professional knowledge of mathematics, natural sciences, engineering basics, and related disciplines necessary for industrial design. Apply this knowledge to solve practical engineering problems in material forming processes, mechanics analysis, electronics, model making, and other relevant areas.

Design Knowledge: Understand fundamental design history, design psychology, ergonomics, and other theoretical aspects. Familiarize yourself with the general procedures and methods of industrial design. Develop comprehensive design expression abilities encompassing hand drawing, model making, and report layout. Possess the capability to integrate user research with product definition, design, interaction, and services for cohesive design development.

Software Knowledge: Proficient in operating design and development software such as AutoCAD, 2D drafting, 3D modeling, and open-source programming. Effectively apply these tools in design practice.

3.2 Abilities Criterion

1) Demonstrate innovative thinking and capabilities by integrating social, health, safety, legal, cultural, and environmental factors to reflect a sense of innovation in the design and development process.
2) Aesthetic Ability: Possess aesthetic literacy aligned with core socialist values, including proficiency in 2D visual, 3D modeling, dynamic interaction, color, and material aesthetics.
3) Research Skills: Utilize industrial design principles to select appropriate scientific methods for researching and analyzing complex design issues, deriving reasonable and effective conclusions through information synthesis.
4) Practical Skills: Apply professional knowledge to practical design activities, considering social, health, safety, legal, management, and cultural perspectives. Engage in pragmatic industrial design practices to solve real-world design problems and propose valuable solutions.
5) Communication Skills: Effectively communicate with industry peers and the public through reports, documents, presentations, and clear expression. Possess an international perspective and proficiency in foreign language application for communication in cross-cultural contexts.
6) Demonstrate organizational and team collaboration abilities, capable of assuming individual, team member, and leadership roles in multidisciplinary teams.

3.3 Qualities Criterion

1) Work Ethic: Possess a humanistic and social science literacy, a sense of social responsibility, and the ability to promote a spirit of labor and selfless dedication in industrial design practice.
2) Clearly understand and adhere to relevant professional ethics and standards in the design, research, and production of industrial products, fulfilling job responsibilities.
3) Social Responsibility: Embrace a scientific and sustainable green design perspective, along with a humanistic design sentiment. Understand the relationship between design activities and environmental and social development, embodying a strong sense of social responsibility as a people-oriented designer。
4) Lifelong Learning: Demonstrate a consciousness of self-directed and lifelong learning, possessing the ability to continuously learn and adapt to developments.

4 **Course matrix**

	Course Name	1.1	1.2	1.3	2.1	2.2	2.3	2.4	2.5	2.6	3.1	3.2	3.3	3.4
General Course	Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era					M					H		H	
	Introduction to China's Modern and Contemporary History					M					H		H	
	Basic Principles of Marxism					M					H		H	
	Career Planning for University Students							H	M	M	M	H	M	H
	Introduction to MAO Zedong Thought and the Theoretical System of Socialism with Chinese Characteristics （ONE、TWO）					M					H		H	
	Social situation and policy 1-8										M		H	
	History of New China/History of Communist Party of China/History of Reform and Opening Up/History of Socialist Development					M					H		H	
	Labor Education1-4							M	L	L	H		H	M
	Military Theory												M	
	Ethics and Rule of Law							M			H		M	
	Mental Health of University Students							L	M	L				
	Employment Guidelines for University Students							M			L	H	M	H
	Innovation and Entrepreneurship Education for University Students				H			M					M	
	University English		L	L			M		H	M				
	English expansion		L	L			M		H	M				
	PE										M			
	Optional Courses of Natural Science, Economic management, and Humanities and Social Sciences	L	L			M								M
	Public Course of Art Aesthetic					H								
Subject Basic Platform Course Public Foundation	Fundamentals of Computer Application A			M			L	M						
	Fundamentals of Programming			H			M	M						
	General Introduction		H										M	

Courses	to Industrial design													
	Advanced Mathematics C (Part 1)	H					M	M						
	Advanced Mathematics C (Part 2)	H					M	M						
	College Physics B	H					L	M						
	Linear algebra	H					L	M						
	Probability and Statistics	H	M				H	M						
	Theoretical Mechanics	H					M	M						
	Mechanics of Materials	H	M				H	M						
	Foundation of Engineering Drawing	H		M				M				L		
	Engineering Drawing and CAD	H		M				M				L		
	Information Retrieval	M	M	M	M		H	H						M
	Fundamentals of Manufacturing Technology A	H	L					H			H	L		
	Electrical Technology	H	M				M	H						
Subject Basic Platform Course Professional Foundation Courses	History of industrial design		H		M									
	Foundation of Painting		H		H	H								
	The Basis of Composition Design		H		H	H								
	Mechanisms and Machine Theory	H			M		M	M						
	Computer Aided Industrial Design (1)			H	M	M		H				M		
	Computer Aided Industrial Design (2)			H	M	M		H				M		
	Industrial Engineering Software Pro/E			H	M			H				M		
	Open Source Hardware and Programming	M	L	H	H		M	H			L			
	Design Psychology		H				H							
	The Processes and Methods of Industrial Design		H		M		M	H		L		L		
	Ergonomics		H		M		M	H		L		L		
	Creative Thinking Training and Expression		H		H	M								
	Materials and Technology	M	H		M	M		H						
	Product Structure Design	M	H	L	H		L	M						
	Product and information interaction Design		H	L	H	M	L	M						
The Major Courses in Transportati	Product Development and Design*		H	L	H	H	H	H	M	M	L	L	H	
	Product CMF	M	H	L	M	M	M	H			M			

on Vehicle Design	design*													
	Product improvement design*	M	H	L	H	H	H	H	M	M	L	L	H	
	Transportation Vehicle Modeling Design *		H	M	H	H	H	H	M	L	L	L	H	
	Digital cabin design for vehicles *		H	M		M			M					
	Automobile marketing practice		M		M		L	H	H	H	L	L	M	M
	Automobile consumer psychology		M				H	M	L				M	
	Automobile culture		M		M			M	M					
	Design management and strategy		H		M		M	H	H	H	L	M	M	L
	Social Innovation design *		H	M	H	H	H	H	H	H	M		H	M
	Service Design*		H	M	H	H	H	H	M	M			M	
	Understanding Flight				M	M					L		M	M
	Aeronautical Design				M	M					L		M	M
The Major Courses in Smart Kitchen System Engineering	Product Development and Design*		H	L	H	H	H	H	M	M	L	L	H	
	Product CMF design*	M	H		L			H	M	M		M	M	L
	Commercial Kitchen Interior Design*		H						H	M				L
	Smart Kitchen Network System Design*	M	H	M	H	H	H	H	M	M	L	M	M	
	Smart Commercial Kitchen Construction and Management	H	H	M			M	H			L	M		
	Food Aesthetic Design	H		L		H		H	H	H	M	M		
	Service Design		H	L	H		H	H	M					
	Technical Specifications for the Construction		H	M	M	H	M	M					M	
	Commercial Intelligent Electronic Technology		L					H	M		M	M		
	Commercial Kitchen Integrated Design and Application		M	L			M	H						
	Design and Investment		H	H	L			H		H		M		
	Professional English													
	Smart Kitchenware Design		H		M									
	Food Packaging Design		H		M									
	Transportation Vehicle Modeling Design		H	M	M									
The Major	Product Improvement Design*	M	H	L	H	M			M			M	H	

Courses in Smart Home Design	Product Development and Design*	M	H		H			M			M			H
	Interior Design		H	M	H		H				M			
	Product CMF Design*	M	H	M	H						H			
	Decorative materials and construction*	H	H	L				H				H		
	Home Exhibition Design	M				M					M			
	Interior Aesthetic Design					H								H
	Home Service Design	M			M				M	H				
	Professional English	H		L				H			M	H		
	Decoration Budgetary Estimate		H		M	H	H			H		H		
	Home Design Management		H		H	M	H	H		M		L		
	Smart Kitchenware Design		H	M	M	M		H			M	M		
	Intelligent Sanitation Design		H	M	M	M		H			M	M		
	Smart Home Control System *		H	L		M		M						
	Modern Furniture Design		H		M	M		H		H	M			M
	Intelligent Lighting and Luminaire Design		H											
Practical Teaching	Military Training									H			M	
	Engineering Basic Training A (I, II)	H	H					H		M	H			
	Product Sketch *		H		H	H								
	Folk Art Collection		M			M		M				M	H	H
	Cultural and Creative Internship		M	L	H	H		H	M	M		M	H	M
	Comprehensive Material Performance*		H		L	M		H			H			
	Model Design		H		M	M		H						
	Course Design*		H	H	H	H	H	H	H	H	H	H	H	
	Thematic Design and Roadshow Presentation*		H	H	H	H	H	H	H	H	H	H	H	
	Commercial Kitchen Understanding Internship*		M			M		M				M	H	H
	Commercial Kitchen Design Internship*	H	H	H	H	H	H	H	H	H	H	H	H	
	Graduation Project (Thesis)		H	H	H	H	H	H	H	H	H	H	H	H
Second Class	Innovation and Entrepreneurship Courses				H			H	H	M	M	M	H	H
	Quality Development Course	L	L	L	M	M					M		H	H

5 Practical Teaching

5.1 Characteristics of Industry-Education Integration

This programme aims to cultivate interdisciplinary engineering application talents by integrating industry and education, with a focus on optimizing the cooperative education pathway. It has expanded the traditional methods of integrating industry and education by not only enhancing school-enterprise internships but also integrating real design projects from cooperative enterprises into professional courses. By deeply integrating practical cases and exercises into talent cultivation, it establishes a new model of cooperative education that emphasizes the fusion of "machinery and art" and progresses in parallel. The university actively incorporates the characteristics of industry-education integration into the practical teaching system, which consists of "one academic year, three semesters, and five study periods." The practice teaching credits include the practice teaching module (33 credits), the practical component of specialized courses (14 credits), and the practical component of general education courses (7.5 credits), with practical credits making up 31.14 percent of the total credits.

In the first academic year, the focus is on solidifying students' disciplinary and professional basic skills, enhancing their moral and physical qualities, and improving their cognitive levels of the profession and industry. This includes basic engineering training, cultural and creative thematic internships, and a concentrated examination of the first year's practical learning outcomes in the 5th segment.

In the second academic year, the main goal shifts to cultivating students' professional design capabilities, mastering design methods and thinking, promoting the spirit of labor, moral education, and enhancing comprehensive qualities. Activities involve model making, product sketches, and other school-enterprise cooperative practices, with a concentrated examination of the second year's practical learning outcomes in the 5th segment.

In the third academic year, the focus shifts to enhancing students' comprehensive professional abilities, cultivating sound personalities, and improving professional qualities. This includes professional field trips and case-based teaching of professional courses introducing real enterprise topics.

The fourth academic year focuses on comprehensive school-enterprise cooperative education, including jointly built comprehensive design application courses, thematic design, roadshow presentations, and cooperative enterprise internships. This culminates in cooperative industry-education-oriented graduation design projects.

Through systematic industry-education integrated teaching, students' practical experience and abilities are enhanced, improving the effectiveness of professional training and promoting synergy between professional

training and social positions. The teaching process considers new situations and problems arising in a socialist market economy, guiding students to dedicate themselves to the country and serve the people in practice, ultimately contributing to local economic development.

5.2 The labor education practice

The labor education practice in this program is primarily conducted through internship courses such as "Course Design" and "Thematic Design and Roadshow Presentation." These courses aim to cultivate in students the spirit of advocating labor and selfless dedication, as well as to help them understand and adhere to the professional ethics and standards of the industrial design industry. Moreover, the courses aim to enhance students' interpersonal communication and cooperation abilities. "Course Design" contributes 0.4 credits to labor education and practice courses, while "Thematic Design and Roadshow Presentation" contributes 0.6 credits to labor education and practice courses. Specific aspects of the practice include:

- Strengthening students' practical work ethic and diligence through design research and analysis, fostering a grounded and hardworking attitude towards labor to enhance the conscientious implementation of labor education.
- Addressing complex design challenges in practical projects by applying professional knowledge and skills comprehensively, enhancing teamwork and collaboration, and translating these experiences into their own understanding of labor and the profession.

6 The extracurricular activities

The extracurricular activities are worth a total of 4 credits, divided into two main modules: "Innovation and Entrepreneurship" and "Quality Enhancement", each worth 2 credits. Detailed criteria for earning extracurricular credits can be found in the "Implementation Measures for Extracurricular Credits at Shanghai University of Engineering Science".

7 Duration of Study and Graduation Requirements

- The standard duration of the undergraduate program in this field is 4 years, with students having the flexibility to complete their studies within 3 to 6 years.
- To graduate, students must accumulate a total of 174 credits within the specified study period. This includes achieving 125 credits of compulsory courses and 49 credits of elective courses (including 4 credits from extracurricular activities).

8 Degree

Upon completion of the program, graduates are awarded a bachelor's degree in engineering in accordance with the Regulations on the Award of Bachelor's Degrees at Shanghai University of Engineering and Technology.

9 Curriculums of Industrial Design Program （170 Credits in total）

1) General Course

51 credits required		General Course									
Course Group		Course Code	Course Name	Credit	Total hours	Lecture hours	Experimental hours	Computer class hours	Assessment Method	Recommended semester	Credit requirements
Ideology and politics, employment and entrepreneurship	I	2291008	Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era	3	48	32	16		*	1	**23**
		2295001	Introduction to China's Modern and Contemporary History	3	48	32	16			1	
		2296001	Social situation and policy1	0.25	8	7	1			1	
		2296009	Labor Education1	0.25	4	2	2			1	
		3101010	Career Planning for University Students	0.5	16	16				1 Fall	
		3101013	Military Theory	2	32	32				1 Spring	
		2292002	Basic Principles of Marxism	3	48	40	8		*	2	
		2293002	Ethics and Rule of Law	3	48	32	16		*	2	
		2296002	Social situation and policy2	0.25	8	7	1			2	
		2296010	Labor Education2	0.25	4	2	2			2	
		3101012	Mental Health of University Students	2	32	32				2 Spring	
		2291009	Introduction to MAO Zedong Thought and the Theoretical System of Socialism with Chinese Characteristics	3	48	32	16			3	
		2296003	Social situation and policy	0.25	8	7	1			3	
		2296011	Labor Education3	0.25	4	2	2			3	
		2296	Social situation and policy	0.25	8	7	1			4	

		04									
		22 96 12	Labor Education4	0.25	4	2	2			4	
		22 96 05	Social situation and policy	0.25	8	7	1			5	
		22 96 06	Social situation and policy	0.25	8	7	1			6	
		31 01 11	Employment Guidelines for University Students	0.5	16	16				6 Fall	
		22 96 07	Social situation and policy	0.25	8	7	1			7	
		22 96 08	Social situation and policy	0.25	8	7	1			8	
		Total		**23**							
	II	22 95 02	History of Communist Party of China	1	16	16				2 Fall 2 Spring ,3 Fall 3 Spring	**1**
		22 95 03	History of New China	1	16	16				2 Fall 2 Spring ,3 Fall 3 Spring	
		22 95 04	History of Reform and Opening Up	1	16	16				2 Fall 2 Spring ,3 Fall 3 Spring	
		22 95 05	History of Socialist Development	1	16	16				2 Fall 2 Spring ,3 Fall 3 Spring	
		Total		**4**							
	III	07 CX 02	Innovation and Entrepreneurship Education for University Students	1	16	12		4		4	**1**
		Total		**1**							
English	Foundation stage	18 02 01	Integrated English(1)	2	32	32			*	1	**8**
		18 02 03	Audio-Visual-Oral English (1)	2	32	32			*	1	
		18 02 02	Integrated English(2)	2	32	32			*	2	
		18 02 04	Audio-Visual-Oral English (2)	2	32	32			*	2	
		Total		**8**							
	Development stage	18 03 04	Business Interpretation	2	32	32				3	**2**
		18 03 05	News English Listening	2	32	32				3	
		18 03 06	English-Chinese Translation	2	32	32				3	
		18 03 07	Appreciation of Chinese Culture	2	32	32				3	
		18 03 08	News English Audiovisual Speaking	2	32	32				3	
		18 03 09	Theory and Practice of English-Chinese Translation	2	32	32				3	
		18	Applied Translation	2	3	32				3	

		0310			2						
		1803 11	Technical English Writing	2	32	32				3	
		1803 12	Modern Rail Transit English	2	32	32				3	
		1803 13	Modern Automotive English	2	32	32				3	
		1803 14	Modern Aviation English	2	32	32				3	
		1803 15	Modern Cruise Ship English	2	32	32				3	
		1803 16	Modern Art English	2	32	32				3	
		1803 17	American Society and Culture	2	32	32				3	
		1803 18	Overview of Chinese Culture	2	32	32				3	
		2195 56	Advanced English Speech	2	32	32				3	
		2195 58	Technical English Reading	2	32	32				3	
		2195 59	Technical English Translation	2	32	32				3	
		2195 60	Selected Readings from English Newspapers	2	32	32				3	
		2195 61	Selected Readings in British and American Literature	2	32	32				3	
		2195 62	Intercultural Communication	2	32	32				3	
		2195 63	Business English	2	32	32				3	
		2195 64	Foreign Trade Correspondence	2	32	32				3	
		2195 66	Overview of Britain and America	2	32	32				3	
		2195 67	English Vocabulary Expansion	2	32	32				3	
		2195 68	Advanced English Reading	2	32	32				3	
		2195 69	Advanced English Listening and Speaking	2	32	32				3	
		Total		**54**							
Computers	Basic Computer Applications	2591 11	Fundamentals of computer applications A	2	32	16	16		*	1	**2**
		Total		**2**							
	Introduction to Programming	2591 05	VB Programming VB	3	48	24	24			2	**3**
		2591	Languages C Programming	3	48	24	24			2	

	ng Design	06									
		2591 10	Python	3	48	24	24		*	2	
		Total		**9**							
Professional introduction		07D017	General Introduction to Industrial design	1	16	16				1	**1**
		Total		**1**							
Physical Education		2380 01	PE（1）	0.75	32	32				1	**4**
		2380 02	PE（2）	0.75	32	32				2	
		2380 03	PE（3）	0.75	32	32				3	
		2380 04	PE（4）	0.75	32	32				4	
		2381 01	Physical Fitness（1）	0.5	16	16				5	
		2381 02	Physical Fitness（2）	0.5	16	16				7	
		Total		**4**							
General Optional Courses	Natural Science	9999 99	Public Optional Courses	6	32	32				1	**4**
		Total		**0**							
	Economic management										
		Total		**0**							
	Humanities and Social Sciences										
		Total		**0**							
	Art Aesthetic										**2**

2) Subject Basic Platform Course

Students are required to earn 66 credits through courses in the "Mechanical Energy - Industrial Design" foundational disciplinary platform.

66 credits required	Subject Basic Platform Course									
Course Group	Course Code	Course Name	Credit	Total hours	Lecture hours	Experimental hours	Computer class hours	Assessment Method	Recommended semester	Credit requirements
General Foundation Courses	019608	Foundation of Engineering Drawing	3	48	48			*	1	**35**
	210195	Advanced Mathematics C (Part 1)	4	64	64			*	1	
	249101	Fundamentals of Manufacturing Technology A	3	48	48				1	
	019609	Engineering Drawing and	2	32	16		16		2 Fall	

		CAD								
	210196	Advanced Mathematics C (Part 2)	4	64	64			*	2	
	219161	Linear algebra	2	32	32				2	
	219263	College Physics B	4	64	64			*	2	
	019507	Theoretical Mechanics	3	48	48				3	
	219163	Probability and Statistics	3	48	48				3	
	249205	Electrical Technology	3	48	44	4			3	
	260110	Information Retrieval	1	16	8		8		3	
	019508	Mechanics of Materials	3	48	42	6		*	4	
	Total		**35**							
Professional Foundation Course	070207	Materials and Technology	2	32	16	16			1 Spring	
	071705	Foundation of Painting	2	32	32				1 Fall	
	071721	History of industrial design	1	16	16				1 Spring	
	071762	The Basis of Composition Design	3	48	24		24		1 Spring	
	071763	Computer Aided Industrial Design	2	32	16		16		3 Fall	
	019311	Mechanisms and Machine Theory	4	64	60	4		*	4	
	071776	Computer Aided Industrial Design (2)	2	32	16		16		4 Fall	
	071778	The Processes and Methods of Industrial Design	2	32	22	10			4 Spring	**31**
	071779	Creative Thinking Training and Expression	2	32	16		16		4 Fall	
	070227	Ergonomics	2	32	32			*	5 Fall	
	071768	Format Design	1	16	16				5 Spring	
	071777	Open Source Hardware and Programming	2	32	16	16			5 Spring	
	071780	Product Structure Design	2	32	16	16			5 Fall	
	071781	Product and information interaction Design	2	32	16	16			6 Fall	
	071B42	Design Psychology	2	32	24		8		6 Spring	
	071775	Industrial Engineering Software Pro/E	1	16	8		8		7 Spring	
	Total		**32**							

3) **Professional Course（Required 20 credits)**

Course Group		Course Code	Course Name	Credit	Total hours	Lecture hours	Experimental hours	Computer class hours	Assessment Method	Recommended semester	Credit requirements
The Major Courses	Transportation Vehicle Design	077A02	Product CMF design	2	32	16	16			5 Fall	**12**
		077A03	Product Development and Design	2	32	16	16			5 Spring	
		077A01	Product Improvement Desig	3	48	16	32			6 Fall	
		077A04	Transportation Vehicle Modeling Design	3	48	16	32			6 Spring	
		077A05	Digital Cabin Design for Vehicles	2	32	16	16			7 Fall	
		Total		**12**							
	Smart Kitchen System	077B10	Product Improvement Design	3	48	16	32			5 Spring	**12**
		077B11	Product CMF design	2	32	16	16			5 Fall	
		077B02	Commercial	2	32	16	16			6 Fall	

			Kitchen Interior Design								
		077B03	Smart Kitchen Network System Design	2	32	16	16			6 Spring	
		077B04	Smart Commercial Kitchen Construction and Management	3	48	32	16			7 Fall	
		Total		**12**							
	Smart Home Design	077C01	Product Development and Design	2	32	16	16			5 Fall	
		077C19	Product CMF design	2	32	16	16			5 Spring	
		077C03	Interior Design	3	48	24	24			6 Fall	**12**
		077C05	Decorative materials and construction	2	32	16	16			6 Spring	
		077C18	Product Improvement Design	3	48	16	32			7 Fall	
		Total		**12**							
Major optional courses	Transportation Vehicle Design	060236	Automobile marketing practice	2	32	32			*	5 Spring	
		077A08	Service Design	2	32	24	8			5 Spring	
		077A09	Smart Kitchenware Design	3	48	24	24			5 Spring	
		077A10	Understanding Flight	2	32	32				5 Fall	
		071396	Professional English	1	16	16				6 Spring	
		071730	Design and Investment	1	16	16				6 Spring	**8**
		077A06	Design Management and Strategy 设计管理与战略	2	32	24	8			6 Spring	
		077A07	Social Innovation Design	2	32	16	16			6 Spring	
		077A11	Aeronautical Design	2	32	32				6 Spring	
		060411	Automobile consumer psychology	2	32	32				7 Fall	
		060415	Automobile culture	2	32	32				7 Fall	
		Total		**21**							
	Smart Kitchen System Engineering	071756	Service Design	2	32	32				5 Spring	
		077B05	Food Packaging Design	2	32	16	16			5 Fall	
		077B07	Technical Specifications for the Construction	2	32	24	8			5 Spring	
		071727	Commercial Intelligent Electronic Technology	3	48	48				6 Spring	
		077B01	Smart Kitchenware Design	3	48	24	24			6 Fall	
		077B06	Food Aesthetic Design	1	16	16				6 Spring	**8**
		077B09	Professional English	1	16	16				6 Spring	
		077B12	Transportation Vehicle Modeling Design Transportation Vehicle Modeling Design	3	48	16	32			6 Spring	
		077B15	Design and Investment	1	16	16				6 Spring	
		077B08	Commercial Kitchen Integrated	3	48	16	32			7 Fall	

			Design and Application								
		Total		**21**							
	Smart Home Design	077C04	Smart Home Control System	2	32	16	16			5 Fall	**8**
		077C12	Intelligent Lighting and Luminaire Design	2	32	16	16			5 Spring	
		077C13	Smart Kitchenware Design	2	32	16	16			5 Fall	
		077C15	Modern Furniture Design	2	32	16	16			5 Spring	
		077C06	Home Exhibition Design	2	32	16	16			6 Spring	
		077C07	Interior Aesthetic Design	2	32	16	16			6 Fall	
		077C14	Intelligent Sanitation Design	2	32	16	16			6 Fall	
		077C20	Professional English	1	16	16				6 Spring	
		077C08	Home Service Design	2	32	16	16			7 Fall	
		077C09	Decoration Budgetary Estimate	2	32	24	8			7 Fall	
		077C10	Home Design Management	2	32	16	16			7 Fall	
		Total		**21**							

4) Practice Teaching

Course Group		Course Code	Course Name	Credit	Total hours	Assessment Method	Recommended semester	Credit requirements
Public Compulsory courses	Public basic practices	310114	Military Training	2	2 week		2 Spring	**2**
		Total		**2**				
	Subject Basics Practice	249311	Engineering Basic Training A (I)	2	2 week		1 Spring	**4**
		249312	Engineering Basic Training A (II)	2	2 week		3 Spring	
		Total		**4**				
	Foundational Professional Practice	071782	Modeling	2	2 week		3 Spring	**2**
		Total		**2**				
	Integrated Professional Practice	071481	Comprehensive Material Performance	2	2 week		2	**2**
		Total		**2**				
	Industry-Academia Partnership Practice I Industry-Academia Partnership Practice II	071783	Product Sketch	2	2 week		4	**4**
		073131	Course Design	2	2 week		4	
		Total		**4**				
	Industry-Academia Partnersh	071784	Thematic Design and Roadshow Presentation	2	4 week		7	**2**
		Total		**2**				

	ip Practice III							
	Specialization in Transportation Vehicle Design	070028	Graduation Project（Thesis）	12	16 week		8	**12**
		Total		**12**				
Compulsory Track for University - Enterprise Cooperative Practice (2)	Specialization in Intelligent Commercial Kitchen Systems Engineering	070801	Cultural and Creative Internship	2	2 week		2	**5**
		070295	Folk Art Collection	3	3 week		6	
		Total		**5**				
	Specialization in Smart Home Design Foundational Professional Practice	077B13	Commercial Kitchen Understanding Internship*	2	2 week		2	**5**
		077B14	Commercial Kitchen Design Internship*	3	3 week		6	
		Total		**5**				
	Integrated Professional Practice	077C16	Furniture and Interiors Internship	2	2 week		2	**5**
		077C17	Home Design Practical Training	3	3 week		6	
		Total		**5**				

5) The extracurricular activities

Module	Category	Credit	Recommended semester	Required credit
The extracurricular activities	Innovation and Entrepreneurship	2	1-8	4
	Quality Development	2	1-8	