附件 1：申报专业培养方案

Zhejiang Sci-Tech University Doctoral Degree Program Outline

Textile Science and Engineering(082100)

(For International Students)

Textile science and engineering(TSE) is one of the strong and superior discipline in ZSTU. With a history of more than one hundred years, TSE started to enroll students to study for bachelor degree in 1959 and started master program in 1979. In 1983, TSE had the "silk engineering" master's degree award authority, and in 1999 project "silk engineering" was replaced by on "textile engineering". In 1990 TSE had "textile chemical and dyeing and finishing engineering" master's degree award authority, in 1993 "clothing design and engineering" master's degree award authority, and in 1998 "textile materials and textile design" master's degree award authority. In 2006 TSE had "Textile engineering" doctoral degree award authority. In March 2011, TSE had the "textile science and engineering" level 1 discipline doctorate award authority. Textile science and engineering teachers strength is strong, owning more than 40 doctoral supervisors and a lot of related researchers, experts, scholars, which include the CAE member ,national and provincial leading talents, and members of the discipline review group of the State Council. "Textile science and engineering" and "Applied chemistry and ecology dyeing and finishing engineering" are priority discipline. The textile fiber material and processing technology national local united engineering laboratory, Advanced textile materials and preparation technology key laboratory of Ministry of Education, Ecological dyeing and finishing engineering research center of Ministry of Education, National clothing experimental teaching demonstration center of Ministry of Education, Zhejiang key laboratory of Silk fiber materials and processing technology , Zhejiang clothing engineering research center, Zhejiang key laboratory of Industrial textile material and preparation technology, Zhejiang engineering laboratory of textile materials and processing technology, and textile and daily chemicals science and technology cooperation base are the scientific research platform of TSE. In recent years, a large number of national, provincial, international cooperation and enterprise cooperation research projects have completed. These project won a great amount of achievements, which include two "The second prize of national technical invention and scientific", two "The second prize of national

technological progress", more than fifty provincial science and technology achievement awards, and two provincial education achievement prizes.

I. Objectives

1. Enhance professional research capabilities in specialized fields.

2. Achieve proficiency in Chinese, enabling the ability to read scientific and technical literature and engage in professional communication in Chinese.

3. Cultivate international students in China who "understand and befriend China" by studying and gaining insights into China's system, society, and culture.

4. Cultivate versatile talents with a solid foundation, strong innovation and practical skills, and an international perspective, tailored to meet the development needs of the modern textile and new materials industry as well as the garment sector.

II. Research Areas

1. Textile materials and textile design.Silk science and resources comprehensive utilization of silk, fiber of new materials, design theory and method, textile composite materials, textiles, etc. Research contents including the molecular structure of silk fibrin and serine structure and physical and chemical properties, silk protein biological functional materials such as silk high-tech applications, new type spinning method, the preparation of various functional fiber, high-performance fiber, and nano-fiber, textile composite material processing technology, nano-composite, fiber reinforced composite materials, digital principle and mathematical model of fabric, computer simulation and computer analog simulation of yarn and fabrics, computer simulation automatic implementation of fabric real color.

2. Textile engineering.Silk fiber processing theory and technology, modern spinning theory and technology, industrial textiles processing technology research, etc. Research content including silkworm cocoon physical and chemical properties and molecular conformation of silk protein and the cocoon reel-ability of cocoon features, new technology and equipment of cocoon cooking, new silk technology, new materials, physical and chemical modification of silk fiber; fiber processing, weaving, knitting, the new 3D weaving, textile CAD theory and application, the multi component fiber mixed, multiple processing technology, organization structure optimization design, fabric after processing technology, non w ovens, automotive textiles, geotextiles, medical textiles, theory and processing technology of industrial textiles.

3. Chemical and textile dyeing and finishing engineering. Ecological dyeing and finishing technology, functional dyeing and finishing technology, the new textile chemicals. Research content including structure, dyeing properties and processing technology of new ecological textile materials, dyeing and finishing technology of high efficiency, energy saving and emission reduction, new clean production technology, low temperature plasma processing, comfort finishing, health care finishing, nano-function finishing, functional coating finishing, chemical coating finishing, bionic color technology, theory and application of natural functional materials, the design, preparation and application of environmental protection and the functional textile chemicals, and the theory research and product development of green chemical synthesis.

4. Fashion design and engineering. Fashion design and engineering is an applied scientific discipline which covers variety of subjects such as technique, art, materials, design, engineering, management, computer application etc. The fashion design and engineering department of Zhejiang Sci-Tech University was founded in 1982, is one of the earliest fashion design and engineering department nationwide. The fashion school of Zhejiang Sci-Tech University started enrolled master student in 1993 and PhD students in 2011. And the fashion design and engineering discipline was awarded Zhejiang Provincial Key Supported Discipline in 1999, and then listed in Zhejiang Provincial Key Discipline in 2002, it also was reconfirmed as Zhejiang Provincial Key Discipline (A-class) in 2004, and in 2012, it was awarded as one direction of Zhejiang Provincial he Priority among Priorities Discipline primary discipline.The research areas in this major include the researches of ergonomics and new garment techniques, garment structure design and comfort, and digital garment modeling. The research content contains 3D human body measurement, MTM techniques, the division of somato type, the compatibility between garment structure and human body, garment techniques, fabrics, etc., heat-moisture comfort, thermal manikin technology, testing and evaluation of Fashion pressure comfort and shape comfort, dynamic imulation techniques, management of supply chain, quality control and process optimization, garment consumer behaviors and garment product development, etc.

III. Educational system & Length of Study

The mode of study is full-time.

The standard duration of study is 4 years, with a maximum allowable study period of 7 years.

IV.Teaching Format

Supervisors or a supervising group of teachers will tutor the postgraduate students for academic doctoral degree.

V.Curriculum and Credit Requirements

The course-learning phase of the doctoral degree program is normally 1 year, adopting credit system.

The course-learning phase of the doctoral degree program is normally 1 year, adopting credit system. Students are required to take at least 14 credits during their degree studies; Among them, course credits should be at least 12 credits (including 6 credits for public compulsory courses, 3 credits for professional compulsory courses, at least 2 credits for professional elective courses, and at least 1 credit for public elective courses), and 2 credits for academic activities.

“Education on China's National Conditions for International Students B”(IF20001) of public elective courses is Recommended.

course nature	Course Code	Course Name	Hour/ Credit	Semester	course type	Notes
Public Compulsory Courses	CC10009	Basic Chinese (I)	54/3	一		
	FL10026	English Writing of Academic Paper	16/1	一		
	FL20004	The Outline of China	36/2	一		
Major Compulsory Courses	TS21003	Frontier Technologies in Textile Engineering*	48/3	一		
Major Elective Courses	MT22015	Advanced Color Science*	32/2	一		
	MT22014	Modern Polymer Physics*	32/2	一		
	FD22001	Apparel Product Development	48/3	一		
	FD22002	SPSS Statistics Analysis for Apparel Research	48/3	一		
	MT22013	Physics of Fibers*	32/2	二		
	MT22012	Textile composites*	32/2	二		
	MT21008	New textile fiber materials*	48/3	二		
	FD22003	Fashion Consumer Behavior	32/2	二		
	MT22011	Modern characterization and measurement technology*	32/2	二		

	MT21007	Advanced Organic Chemistry*	48/3	二		
Others	HJ20049	Practical Training	0		Students are required to take at least 2 weeks practical training, participate in at least one social investigation, and write relevant report. Normally the training should be completed in the first academic year.	
	HJ20002	Academic Activities	2		Students are required to attend at least 4 academic meetings within the study duration and present academic reports in at least 10 seminars.	
	HJ20010	Dissertation	0.0		Longer than 2 years.	

VI. Dissertation Requirement

After completing the main course learning tasks, doctoral students should undergo a doctoral candidate qualification assessment, and only after passing the assessment can they enter the doctoral thesis stage.

Thesis work is the main learning task for doctoral students and an important link in cultivating their research and innovation abilities. Doctoral students generally start their thesis work from the second semester of their first year of enrollment (or doctoral stage), and must have a rigorous academic attitude and a good scientific style in their thesis work.

Requirements for a doctoral thesis: The thesis should be a complete and systematic academic paper that demonstrates the author's ability to independently engage in scientific research work, and should make innovative achievements in the discipline or specialized technology. It should have theoretical significance and practical value in response to China's social development and economic construction, and contribute to the development of the discipline.

In order to ensure the quality of the thesis, strengthen the process management of thesis work, strictly implement the opening report, mid-term report, final report, and thesis pre defense system.

During the process of writing a thesis, the department and supervisor should pay attention to the following aspects:

1. Topic selection

Doctoral students, under the guidance of their supervisors, select their thesis topics by reviewing and collecting relevant literature, conducting surveys, and conducting pre experimental research. The starting point for selecting a topic should be high, and one should conduct novelty search work in the field of research. Choose topics in cutting-edge disciplines or topics of significant importance to China's economic and social development. The selected topic should have good research conditions and manpower allocation.

2. Thesis proposal, mid-term examination, pre defense, thesis review, and thesis defense: in accordance with the "Regulations on Graduate Education at Zhejiang University of Technology".

3. Thesis writing

To ensure the quality of doctoral dissertations, doctoral students should engage in scientific research and thesis work for no less than 2 years from the date of proposal. In the paper, one should provide a detailed explanation of their innovative achievements, highlighting the achievements of previous researchers in this field and their own contributions. If the research work during the doctoral period continues and deepens during the master's period, the results of the master's thesis can be cited in the doctoral thesis, but cannot be regarded as the achievements of obtaining the doctoral degree.

4. Requirements for innovative achievements

The requirements for innovative achievements of graduate students applying for degrees shall be implemented in accordance with the "Requirements and Verification Measures for Innovative Achievements of Graduate Students Applying for Degrees in the Textile College". The review and recognition of innovative achievements shall be carried out in accordance with the relevant review and recognition methods and documents of the college where the student is enrolled.

VII. Graduation & Degree Conferment

Within the specified time, the doctoral student must complete the required courses, pass the examinations, has the required credits, and complete their doctoral dissertation, successfully defended. The doctoral students who attain the standards of graduation will be awarded the graduation certificate, who attain the standards of academic degree

conferment and are approved by the university academic degree evaluation committee, will be conferred the doctoral degree.

The doctoral students who fail to pass the vote of the defense committee or the degree evaluation subcommittee have one and only one opportunity to reapply their defense within two years. Those who pass the defense will be awarded the graduation certificate, who attain the standards of academic degree conferment and are approved by the university academic degree evaluation committee, will be conferred the doctoral degree. Those who fail to pass the defense will be considered as completion and will be awarded the certificate of completion.

VIII . Other notes

According to the relevant provisions of the Ministry of Education's "Quality Standards for Higher Education for International Students in China (Trial)", the Chinese language proficiency of PhD graduates should reach at least Level 3 of the International Standards of Chinese proficiency.

Director of the Textile Science and Engineering Graduate Education Guidance Committee：

the Chairman of Degree Evaluation Subcommittee ofCollege of Textile Science and Engineering（International Institute of Silk）：

Date: