

# 纺织工程专业本科培养方案（2018版）

## Undergraduate Program for Textile Technology and Engineering

学科门类：工学

二级类：纺织科学与工程类

专业编号：081601

Discipline: Engineering

Secondary discipline: textile science and engineering

Major Code: 081601

### 一、培养目标

#### I. Cultivation Objectives

本专业培养具有人文素养和社会责任感，系统掌握纺织工程领域专业知识和实践应用方法，具有创新意识和国际视野，具备相互协作和自主学习能力，能够运用多学科知识分析和解决纺织品加工过程中的技术问题，能成为企业技术骨干，能胜任纺织工艺设计、新产品开发、质量控制、运行管理和检验贸易等岗位的应用型创新人才。具体分为以下五个方面：

目标 1：有良好的职业素养和社会责任感，有意愿并有能力服务社会；

目标 2：具有工程知识、纺织专业知识和工程实践方法，分析和解决纤维及其制品的设计、加工及应用中的技术难题；

目标 3：面向纺织相关领域，具有纺织工程设计与管理能力，可从事设计、开发、质量控制、运行管理和检验贸易等工作，能成为单位的技术、管理骨干；

目标 4：具有团结协作精神和国际视野，能与国内外同行进行沟通和交流；

目标 5：能自主学习和适应发展，实现能力和技术水平的不断提升。

The undergraduate (B.E) course in Textile Technology and Engineering aims to endow application-oriented innovative talents with humanistic quality and social responsibility, who systematically master the specialty knowledge of textile engineering and practical application approaches, have innovative consciousness and international perspective, possess the ability of cooperation and initiative learning, be capable to analyze and solve the technical problems in textile product process with multidisciplinary knowledge, and who are potential to become technical backbones in enterprises, and competent to do the work in textile process design, new product development, quality control, operation management, inspection and trade.

The objectives can be grouped into the following:

1. Possessing good professional quality and social responsibility, willing and capable to serve the society;
2. Being capable to analyze and solve the complicated technological problems in design, manufacturing and application of fiber and fiber products with engineering knowledge, textile specialty knowledge and engineering practice approaches;
3. Oriented to textile-related domain, possessing textile engineering design and management capability, and qualified for the work in design, development, quality control, operation management, and inspection and trade, etc., potential to become the technical and management backbones in enterprises;
4. Possessing team spirit and international perspectives, and being capable to communicate with domestic and overseas counterparts;
5. Being capable to learn initiatively and accommodate to development, and continuously enhance capacity and technical level.

## 二、毕业要求

### II. Programme Outcomes

纺织工程专业毕业生应达到以下十二个方面的毕业要求：

1. **工程知识：**能将数学、自然科学、工程基础和纺织工程专业知识，用于分析和解决纺织材料（制品）的设计、加工、检验等纺织工程领域复杂工程问题。
2. **问题分析：**能够应用数学、自然科学和工程科学的基本原理，识别、表达、并通过文献研究分析复杂工程问题，以获得有效结论。
3. **设计/开发解决方案：**能够设计针对纺织工程领域工程问题的解决方案，提出加工方法、设计工艺路线、选择加工设备、优化生产工艺，并能够在设计环节中体现创新意识，考虑社会、健康、安全、法律、文化以及环境等因素。
4. **研究：**能够基于科学原理并采用科学方法对纺织工程领域复杂工程问题进行研究，包括设计实验、分析与解释数据、并通过信息综合得到合理有效的结论。
5. **使用现代工具：**能够针对纺织工程领域复杂工程问题，开发、选择与使用恰当的技术、资源、现代工程工具和信息技术工具，包括对复杂工程问题的预测与模拟，并能够理解其局限性。
6. **工程与社会：**能够基于纺织工程相关背景知识进行合理分析，评价纺织工程专业领域实践和复杂工程问题解决方案对社会、健康、安全、法律以及文化的影响，并理解应承担的责任。
7. **环境和可持续发展：**能够理解和评价针对纺织工程领域复杂工程问题的工程实践对环境、社会可持续发展的影响。
8. **职业规范：**具有人文社会科学素养、社会责任感，能够在纺织工程实践中理解并遵守工程职业道德和规范，履行责任。
9. **个人和团队：**能够在多学科背景下的团队中承担个体、团队成员以及负责人的角色。
10. **沟通：**能够就复杂工程问题与业界同行及社会公众进行有效沟通和交流，包括撰写报告和设计文稿、陈述发言、清晰表达或回应指令，并具备一定的国际视野，能够在跨文化背景下进行沟通和交流。
11. **项目管理：**理解并掌握工程管理原理与经济决策方法，并能在多学科环境中应用。
12. **终身学习：**具有自主学习和终身学习的意识，有不断学习和适应发展的能力。

Graduates from textile technology and engineering should reach the following twelve requirements:

1. **Engineering knowledge:** Be capable to solve complex engineering issues in textile engineering fields with mathematics, natural science, basic engineering knowledge and textile engineering professional knowledge.
2. **Issue analysis:** Be capable to identify, express, analyse, and demonstrate complicated engineering issues in textile technology and engineering and get effective conclusions with the basic principle of mathematics, natural science, engineering science, and textile technology, combined with the study on scientific literature.
3. **Design/Development solutions:** Be capable to design engineering project plans or technological processes that satisfy specific demands for complicated engineering issues in textile engineering project design and fibrous product development, with innovation and consideration on factors such as society, health, security, legislation, culture and environment.
4. **Research:** Be capable to conduct research on complex engineering issues in textile engineering field with scientific principle and scientific methods, including designing experiments, analysing and explaining data, and getting effective conclusions through information synthesis.

5. **Utilizing modern technologies:** Be capable to master and apply appropriate engineering technologies, methods, and tools in the design and manufacturing of fibrous products, to analyse and predict the complex engineering problems in textile fields with modern engineering tools and information technology, and understand their limitations.

6. **Engineering and society:** Know the technical criterion, intellectual property rights, industrial policy, laws and legislations; be capable to conduct reasonable analysis based on the background of textile engineering and technology, to correctly evaluate the influence of textile engineering practice and complex problem solutions on society, health, safety, legislation and culture, and understand the responsibility.

7. **Environment and sustainable developments:** Based on understanding the national sustainable-development strategy and corresponding policy, laws and legislations, be capable to correctly evaluate the influence of engineering practice of complex projects in textile engineering fields on environment and society sustainable development.

8. **Career norm:** Establish correct world outlook and philosophy of life and value. Possess good mental quality, and humanistic sciences and social sciences accomplishment. Possess strong sense of social responsibility. Understand and obey engineering career morals and norms, and perform the duty in textile engineering practice.

9. **Individuality and team:** Be capable to act as an individual, team member or team leader under the multidisciplinary background.

10. **Communication:** Be capable to communicate effectually with counterparts or the public in regards to the complex engineering problems in the field of textile engineering, including report writing, document organization, presentation, clear expression and command responding. Be capable to communicate with others in a view of international perspective under cross-cultural background.

11. **Project management:** Understand and master engineering-management principle and economic decision-making method, and be capable to utilize them in multi-disciplinary environment.

12. **Life-long learning:** Possess the idea of initiative-learning and life-long learning, and the ability of adaptation to developments with continuous learning.

### 三、主干学科及课程设置

#### III. Primary Discipline and curriculum

1、主干学科：纺织科学与工程

Primary Discipline (s) : textile science and engineering

2、核心课程（9门）：纺织材料学、纺织材料实验技术、织物组织与结构、纺纱学、纺织概论、针织学（纬编）、针织学（经编）、机织学、非织造学

Core Courses: Textile Material Science、Experimental Technique of Textile Material、Woven Fabric Structure、Spinning Technology、Introduction to Textile Science Knitting Technology (Weft Knitting) Knitting Technology (Warp Knitting)、Weaving Technology、Non-weaving Technology

3、主要实践教学环节：

军训、社会实践、专业课程实验、纺织现场教学实习、工程训练 I、生产实习、学年论文、专业课程设计、毕业实习、毕业设计（论文）。

Main Practical Teaching Tache:

Military Training, Social Practice, Professional Course Experiment, Professional Course Cognition Practice, Engineering training I, Production Practice, Academic Papers, Professional Course Exercise, Graduation Practice, Graduation Design Project (Thesis). I II III IV V VI VII VIII IX X

#### 四、学制与学位

##### IV. Length of Schooling and Degree

修业年限： 4 年， 3-8 年弹性学制。

Duration: 4 years, Length of Schooling: 3 to 8 years

授予学位：工学学士学位

Degrees conferred: Bachelor of engineering

#### 五、毕业学分

##### V. Graduation Requirements

总学分达到 189 分（各平台学分满足最低要求）且第二课堂成绩单合格，可准予毕业。

Graduation qualification can be granted when a student's total credits to 189 with credits for each course category meeting the minimum standard as well as for the extra-curriculum courses meeting the minimum standard.

六、学分分配

VI.Credit Allocation

学分分配表 (Table of Credits)				
课程类别 Courses Classified		学分 Credit		学分比例    Proportion of Period
		理论    Theory	实践    Practice	
通识课程平台    General Courses	必修    Required	36	8	23.3%
	选修    Elective	8	0	4.2%
学科基础课程平台    Basic Courses	必修    Required	45.5	5.5	27.0%
专业课程平台    Major Courses	必修    Required	24.5	2	14.0%
	选修(含方向课 /选修课学分)    Elective	20.5	2	11.9%
创新创业平台    Innovation and Entrepreneurship Courses	必修    Required	2	0	1.1%
	选修    Elective	0	2	1.1%
实践教学平台    Practical Teaching	必修    Required	0	24	12.7%
	选修    Elective	0	9	4.8%
		136.5	52.5	
最低毕业学分    The Lowest Graduate Credit		189 学分		



## 武汉纺织大学本科人才培养方案（2018版）

课程编号 Course Code	课程名称 Courses Names	考核方式	学分数 Cr.		总学时 Hrs.	学时类型 Period lassification				各学期学时分配 Division of class-hour in Every Week of Each Term								备注 Notes	
			理论	实践		讲课 Lec.	实验 Exp.	上机 Ope.	实践 Pra.	一	二	三	四	五	六	七	八		
										1st	2nd	3rd	4th	5th	6th	7th	8th		
98310003	军事理论   Military Theory	考查	1	0	36				36	36									
01310001	工程概论 I   Introduction to Engineering I	考查	1	0	16							16							
16310001	工程概论 II   Introduction to Engineering II	考试	1	0	16								16						
07310001	工程概论 III   Introduction to Engineering III	考试	1	0	16									16					
01310002	工程概论 IV   Introduction to Engineering IV	考查	1	0	16										16				
小计			36	8	818+ 2W														
<b>学分要求: 44学分必修44学分</b>																			
<b>Demand of Credit: 44</b>						<b>Required: 44</b>													

## 通识选修课程（通选课）/Form I (B): General Elective Courses

课程类别 Classification of Courses	学分要求 Demand of Credit	合计 Amount
通识选修课程 General Elective Courses	≥8	128/8





课程类别 Courses Classified	课程编号 Numbers of courses	课程名称 Courses Names	考核方式	学分数 Crs.		总学时 Hrs.	学时类型 Period Classification				各学期学时分配 Division of class-hour in Every Week of Each Term								核心课程 (Core)	备注 Notes
				理论	实践		讲课 Lec.	实验 Exp.	上机 Ope.	实践 Pra.	一 1st	二 2nd	三 3rd	四 4th	五 5th	六 6th	七 7th	八 8th		
专业选修 Elective courses	01330097	针织产品设计 	考查	2	0	32	32										32			
	01330089	机织产品设计 	考查	2	0	32	32										32			
	01330004	变形纱与花式线   Textured Yarns and Fancy Yarns	考查	2	0	32	32										32			
	01330035	产业用纺织品   Industrial Textiles	考查	2	0	32	32											32		
	01330021	纺织品服用性能   Wearing Characteristics	考查	2	0	32	32								32					
	11330107	服装设计基础   Fundamentals of Clothing Design	考查	2	0	32	32								32					
	01330064	专业前沿讲座   Lectures on Frontier Academics	考查	1	0	16	16											16	双语	
	01330053	羊毛衫制作   Sweater Manufacture	考查	2	0	32	16			16								32		
	01330013	纺织厂设计   Textile Mill Design	考查	2	0	32	32											32		
	01330008	纺纱质量控制   Yam Quality Control	考查	2	0	32	32											32		
	01330015	纺织工艺与环境   Air Conditioning and Dedusting in Textile Mill	考查	2	0	32	32											32		
	01330024	纺织品染整   Textile Dyeing	考查	2	0	32	32											32		
	01330092	纹织物设计 	考查	2	0	32	32											32		
	01330023	纺织品贸易   Textile Trade	考查	2	0	32	32												32	
	01330017	纺织面料跟单   Order Supervisor for Woven Fabric	考查	2	0	32	32											32		
	01330085	高分子材料学 A   Polymer materials science(A)	考查	2	0	32	32											32		
	01330061	织袜学   Socks Knitting	考查	2	0	32	32											32		
	01330045	生物医用纺织品   Biomedical Textiles	考查	2	0	32	32											32		
	01330052	新型纺纱   New Spinning Technology	考查	2	0	32	32											32		
	01330016	纺织科技史   History of textile science and technology	考查	2	0	32	32												32	

选  
9  
学  
分



七、教学进程计划表 / X、Teaching Schedule Form

表四：创新创业课程平台

Form 4: Innovation & Entrepreneurship Courses Platform

课程类别 Courses Classified	课程 编号 Numbers of courses	课程名称 Courses Names	考核方式	学分数 Crs.		总学时 Hrs.	学时类型 Period Classification				各学期学时分配 Division of class-hour in Every Week of Each Term								备注 Notes
				理论	实践		讲课 Lec.	实验 Exp.	上机 Ope.	实践 Pra.	一	二	三	四	五	六	七	八	
											1st	2nd	3rd	4th	5th	6th	7th	8th	
必修	97310003	大学生职业生涯规划 I    Career DesignI	考查	0.5		8	8					8							
	97310004	大学生职业生涯规划 II    Career DesignII	考查	0.5		8	8						8						
	97310001	就业指导    Employment Guidance	考查	0.5		8	8							8					
	97310005	大学生创新创业基础    Innovation and Entrepreneurship	考查	0.5		8	8								8				
	小计				2		32												
选修		创新创业课程组    Innovation & Entrepreneurship Courses	考查																课程组 由学校 统一认 定
	小计				2														
学分要求：4 学分，其中必修 2 学分，选修 2 学分。																			
Demand of Credit: 4						Required:2						Elective: 2							

七、教学进程计划表 / X、Teaching Schedule Form

表五：实践教学平台

Form 5: Practical Teaching

类别 Category	课程编号 Numbers of courses	课程名称 Courses Names	必修 选修	学分 Crs.	周数 Total Period	学时类型 Type of Period		各学期学时分配 Division of Class-hour in Every Week of Each Term								备注	地点 Place
						实验 Exp.	实习 Pra.	一 1st	二 2nd	三 3rd	四 4th	五 5th	六 6th	七 7th	八 8th		
实践教学 Practical Teaching	社会实践 Social Practice	01340015	暑期社会实践 I   Social Practice I	必修	1	2W				2W							暑假 校外
		01340016	暑期社会实践 II   Social Practice II	必修	1	2W				2W							暑假 校外
	课程设计 Project Design	04340072	Java 程序课程设计   Course Design of C Programming	必修	1	1w				1w							数计 学院 机房
	实习实训 Practice and Training	01340039	学年论文   Academic Papers	必修	3	3W								3W			
		01340029	纺纱学教学实习   Spinning Course Cognition Practice	选修	2	2W				2W							
		01340036	机织学教学实习   Weaving Course Cognition Practice	选修	2	2W				2W							选修 4学分
		01340043	针织学教学实习   Knitting Course Cognition Practice	选修	2	2W				2W							
		01340028	纺纱实验   Spinning Experiment	必修	2	2W				2W							
		01340035	机织实验   Weaving Experiment	必修	2	2W				2W							
		01340041	针织实验   Knitting Experiment	必修	2	2W				2W							
		02340062	工程训练(A)   Engineering Training(A)	必修	3	3W				3W							
		企业实践 Business Practice	01340038	生产实习(A)   Production practice(A)	必修	3	3W					3W					
	毕业论文 (设计) Graduation Project	01340027	毕业论文(设计)   Graduation Thesis(Design)	必修	12	12W									12W		
小计				36	38W												
学分要求：33 学分，其中必修 29 学分，选修 4 学分。																	
Demand of Credit: 33      Required: 29      Elective: 4																	

## 纺织工程专业教学周历

教学 学 期	周次																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
1 学期 20 周	×	⊙	■	■	←	—	—	—	—	—	—	—	—	—	14	—	→	:	:			
2 学期 20 周	←	—	—	—	—	—	—	—	—	18	—	—	—	—	—	—	—	→	:	//	★	★
3 学期 20 周	←	—	—	—	—	—	—	—	—	18	—	—	—	—	—	—	—	→	:	//		
4 学期 20 周	←	—	—	—	—	—	—	—	—	18	—	—	—	—	—	—	—	→	:	//	★	★
5 学期 20 周	←	—	—	—	—	—	—	—	—	17	—	—	—	—	—	→	:	#	#	#		
6 学期 20 周	←	—	—	—	—	—	—	—	—	18	—	—	—	—	—	—	—	→	:	//		
7 学期 20 周	←	—	—	—	—	—	—	—	—	17	—	—	—	—	—	—	→	:	//	//		
8 学期 20 周	※	※	※	※	※	※	※	※	※	※	※	※	※	※	※	※	◇	×	×			
项目	理论 教学	课程设 计作业	考试	工程 实训	生产 实习	毕业设 计论文	教学实 习或专 业实习	军训	机 动	英语口 语强化	社会 实践	入学 教育	毕业 鉴定									
符号	↔	//	:	△	#	※	○	■	×	☆	★	⊙	◇									
小计	108	7	7	0	2	15	0	4	3	4	4	1	1									

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