

制药工程 Pharmaceutical Engineering

一、培养目标 Training Objectives

培养适应我国社会主义现代化建设需要，德、智、体全面发展，具备制药工程专业知识和创新意识，能在医药、食品、化工、生物等相关部门从事生产、科技开发、应用研究、经营管理等工作的高级复合型工程技术人才。就业去向主要：医药、食品、保健品、化妆品、化工、环保、轻工等。职业定位为预备工程师、科技开发人员、公务员、执业药师等。

This major aims to cultivate advanced composite engineering and technical talents, who can fit the needs of the construction of China's socialist modernization, have an all-round development in moral, intellectual, physical and aesthetic aspects, possess professional knowledge and innovation consciousness in pharmaceutical engineering and the capability to engage in such fields as production, scientific and technological development, application research, operation management and other work in departments related to medicine, food, chemical industry, biology and the like. Graduates will be engaged in such fields as medicine, food, health care products, cosmetics, chemical industry, environmental protection, light industry and the like. Career orientations of graduates will be preparatory engineers, science and technology development personnel, civil servants, pharmacists and so on.

二、基本规格 Basic Specifications

全面掌握药学、制药工程学、生物学、化学等方面基本知识，掌握制药工艺、药理学、药物制剂、药物分析、现代制药技术等领域基本理论和基础知识，接受制药技术、工程实践、科学研究、工艺设计的基本动手能力训练，具备药品生产、质量管理、保证与控制，工艺设计、研究与开发的基本技能和综合素质。

Students are required to fully master basic knowledge of pharmacy, pharmaceutical engineering, biology, chemistry and the like, grasp basic theory and basic knowledge of pharmaceutical manufacturing technology, pharmacology, pharmaceutical preparation, pharmaceutical analysis, modern pharmaceutical technology and other areas, accept basic skills training for pharmaceutical technology, engineering practice and scientific research and technological design and develop the basic skills and overall quality in pharmaceutical production, quality management,

quality control and quality assurance, design, research and development of technology.

系统掌握本学科专业所必需的自然科学、技术科学基础知识以及药物制备技术与工程的基本理论、基本知识和基本技能；掌握药物生产装置工艺与制备设计方法；具有对药品资源、新产品、新工艺进行研究、开发和设计的初步能力；熟悉国家关于制药生产、设计、研究与开发、环境保护等方面的方针、政策和法规；了解本专业领域的理论前沿和应用前景，了解新工艺、新技术与新设备的发展动态，掌握一门外语（达到相应水平）和计算机基本知识，掌握本专业表达和获得科技信息等的基本技能，具有较宽的知识面、具有一定的科研和实际工作能力。

They are also required to systematically master basic knowledge of natural science and engineering science and the basic theory, basic knowledge and basic skills of medicine preparation process and engineering, master the process of medicine production equipment and the design method of medicine preparation, develop preliminary ability in research and development and design of drug resources, new products and new process. At the same time, they are required to be familiar with the policies, laws and regulations of each country on pharmaceutical production, design, research and development, environmental protection and other aspects, understand the theory frontier and application prospect in this field, understand the development trend of new process, new technology and new equipment. And they are required to master a foreign language (to reach the corresponding level), basic computer knowledge, basic skills to convey or accept scientific and technological information related to this major and have broad knowledge scopes and ability in scientific research and practical working.

在系统学习本专业基础知识基础上，培养学生独立思考、发现问题和解决问题能力，通过实践环节等途径，提高专业水平，突出培养学生的科学精神、创新意识、创新思维和创新技能。

On the basis of systematic learning of specialized knowledge, students are expected to develop abilities in independent thinking and discovering and solving problems, improve the level of expertise and nurture scientific spirit, innovative consciousness, innovative thinking and skills by way of practice.

三、学制与学位 Length of Schooling and Degree

1. 学制与修业年限 Length of schooling & Study duration

标准学制为四年，在校修业年限四年制为 3-6 年。

The standard length of schooling is four years. Study duration can be 3-6 years.

2. 最低毕业学分和授予的学位

Minimum Credits for Graduation and the Degree Awarded

最低毕业总课程学分为 169 学分，授予工学学士学位。

The minimum credits required for graduation is 169 credits; Bachelor's Degree in Engineering will be awarded.

四、主干学科和主要课程 Main Subjects and Main Courses

涵盖学科：制药与化学学科、药学学科、生物技术学科。

Subjects covered: Pharmaceutical and Chemical Sciences, Pharmaceutical Sciences and Biotechnology.

专业核心课程：8 门

Number of core courses required: 8

学位课程：大学英语 II（国际生免修），3-5 门专业核心课程。学生修读学位课程的学分绩点须达到《湖州师范学院学士学位授予条例》中规定的最低要求，方可获得学士学位。

Degree courses: College English II (international students are exempt), 3 to 5 core courses required for this major. Students who take degree courses must meet the minimum requirement for credit point specified in the *Regulations on Bachelor's Degrees of Huzhou University*, thus he/she can obtain a Bachelor's Degree.

注意：课程名称前标注“Δ”表示该课程为学位课程，本专业学位课程总共 5 门。

Note: the name of the course which is marked “Δ” means that the course is a degree course, and there are 5 degree courses in this major.

主要课程：Δ 大学英语、Δ 药物有机化学、工程制图与机械基础、Δ 药剂学、Δ 药物化学、化工原理、Δ 药物分析、制药设备与工艺设计、制药工艺学课程设计与模拟训练

Main courses: Δ College English (international students are exempt), Δ Medicinal Organic Chemistry, Engineering Drawing and Machinery Foundation, Δ Pharmaceutics, Δ Medicinal Chemistry, Principles of Chemical Engineering, Δ Pharmaceutical Analysis, Pharmaceutical Equipment and Technology Designing, Course Designing of Pharmaceutical Technology and Simulation Training