

BSC

BIOLOGICAL
SCIENCES

生物科学

XJTLU | ACADEMY OF LIFE AND
NATURAL SCIENCES
生命与自然科学学院

CAREERS

Graduates from this programme find career opportunities in the fields of biochemistry, genetics, microbiology, and molecular biology and are well-equipped with the scientific knowledge, experimental techniques, and key skills required by industry, research institutions and universities, and government and public services. Graduates can also choose to go onto the further study in related fields including biotechnology, nanotechnology, chemistry and pharmaceuticals.

MODULES

YEAR ONE

In the UK, undergraduate programmes typically last three years, whereas in China, they normally span four years. Accordingly, at Xi'an Jiaotong-Liverpool University (XJTLU), students who have already obtained the required credits and qualifications may be admitted directly into Year 2 of their chosen programme. The majority of students, however, enter Year 1, where they take foundation courses that include language training, basic mathematics, and subject-specific preparatory modules.

YEAR TWO

Core Modules

- BIODIVERSITY OF ANIMALS, PLANTS AND MICROBES
- EXPERIMENTAL DESIGN AND ANALYSIS
- CELLULAR AND MOLECULAR BIOLOGY
- CHEMICAL PRINCIPLES OF LIFE
- THE BIOLOGY OF MICROBES
- INTRODUCTION TO BIOCHEMISTRY
- INTRODUCTION TO EVOLUTION AND GENETICS
- MOLECULAR BIOLOGY TECHNIQUES
- INTRODUCTION IN ECOLOGY
- INTRODUCTION TO ARTIFICIAL INTELLIGENCE FOR SCIENCE
- ENTREPRENEURIAL EDUCATION IN SCIENCE: INNOVATING FOR TOMORROW

YEAR THREE

Core Modules

- BIOCHEMICAL METHODS
- ADVANCED GENETICS
- CELL BIOLOGY TECHNIQUES
- PRACTICAL BIOINFORMATICS
- PROTEINS IN ACTION

START DATE
Every September

DURATION
Four years

2+2 STUDY
Available

LOCATION
Suzhou

ATTENDANCE
Full time

SCHOOL
Academy of Life and
Natural Sciences

QUALIFICATION
XJTLU
BSc Biological Sciences

University of Liverpool
BSc Biological Sciences
(hons,4+0)

BSc Biochemistry
BSc Genetics
BSc Microbiology
BSc Biological Sciences
(hons,2+2)

Optional Modules

- GENOME EXPRESSION AND MAINTENANCE
- MEDICAL MICROBIOLOGY AND VIROLOGY
- CELL SIGNALLING
- INTRODUCTION TO BIOLOGICAL CHEMISTRY
- BIOTECHNOLOGY
- STRUCTURE AND DYNAMICS OF BIOMOLECULES
- EPIDEMIOLOGY
- GLOBAL HEALTH AND SOCIETY
- COMMUNICABLE AND NON-COMMUNICABLE DISEASES IN PUBLIC HEALTH
- INTRODUCTORY STATISTICS FOR NATURAL SCIENCES

YEAR FOUR

Core Modules

- FINAL YEAR PROJECT
- MOLECULAR IMMUNOLOGY
- CRITICAL THINKING AND APPLIED SKILLS IN SCIENCE RESEARCH

Optional Modules

- BIOLOGY OF DISEASE
- BIOCHEMICAL MESSENGERS
- BIOTECHNOLOGY AND SOCIETY
- GENE EXPRESSION AND GENOME ANALYSIS
- PROTEIN STRUCTURE AND FUNCTION
- HIGH-THROUGHPUT APPROACHES AND SYSTEMS BIOLOGY

Xi'an Jiaotong-Liverpool University
西交利物浦大学

BSC BIOLOGICAL SCIENCES

This programme is designed to offer comprehensive education and training in understanding a wide range of biological processes. Leveraging XJTLU's unique international environment, it equips graduates with the skills and knowledge needed to pursue advanced research opportunities at universities in both Western countries and China, as well as to excel in the bio-industry.



Programme Director:
Dr. Yong Shen
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KNOWLEDGE AND SKILLS

By the time you graduate from the BSc Biological Sciences programme, you will have:

- An understanding of the major issues and challenges in biomedical sciences
- The ability to understand and describe biological systems
- The skills to design and conduct experiments and investigations
- An appreciation of the moral, social, and ethical issues associated with research and development in the biosciences.

WHY SHOULD I STUDY BIOLOGICAL SCIENCES AT XJTLU?

- Graduate from a programme that has international accreditation by the Royal Society of Biology, assuring excellence in teaching, curriculum provision and technical skills development as well as enhanced graduate employability
- Benefit from XJTLU's strategic location near many biotechnology companies in BioBay, a national biotechnology hub with more than 400 companies with the opportunity for internships and work experience
- Learn in a highly international, research-active environment from academic staff trained in globally respected universities and institutes from around the world
- Enjoy prestigious scientific symposia, conferences and summer schools at the nearby Cold Spring Harbor Asia, giving you the chance to interact with world-famous researchers
- Earn two degrees: an XJTLU degree from the Chinese Ministry of Education and a globally recognised degree from the University of Liverpool, a member of the Russell Group of leading UK universities.

June 22,2026

具体信息以官方网站为主
Please refer to the official website for specific
programme information

生物科学

本专业旨在提供最新的知识教育及先进的技能培训, 使得学生综理解现代生物医学知识, 并运用西交利物浦大学国际化教育模式, 为毕业生在中、西高校及生物医药产业研究领域提供合格的人才。



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June 22,2026
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知识与技能

毕业生将获得以下几个方面的知识和能力

- 了解生物医学科学中的主要问题和挑战
- 理解和描述生物系统的能力
- 设计和进行实验的能力以及调查技能
- 对与生物科学研究和发展相关的道德、社会和伦理问题的理解

专业特色

- 因其在教学、课程设置、技能发展、提升学生就业能力方面的优异表现, 该专业获得英国皇家生物学会的国际认证。
- 西交利物浦大学毗邻国家级生物技术中心——生物纳米园, 400多家生物科技企业为学生提供丰富的实习及工作机会。
- 拥有一支由国际知名学术专家组成的教职团队, 享有高度国际化和浓厚的科研氛围。
- 毗邻冷泉港亚洲会务所在地, 冷泉港亚洲会务在苏州工业园区举办了许多具有国际影响力的科研会议、学术会议和夏令营, 为学生提供了与国际知名研究人员互动的机会。
- 毕业生可获得中国教育部认可的西交利物浦大学学位和国际认可的利物浦大学学位。

就业

本专业的毕业生在生物化学, 遗传学, 微生物学和分子生物学领域具有广阔的就业机会, 具备行业内、研究机构和大学、政府和公共服务部门所需的科学知识、实验技术和关键技能。毕业生亦可选择继续深造生物科技、纳米科技、化学及制药等相关学科。

课程

第一年

在英国, 本科阶段学习学制三年, 而中国本科阶段学制为四年。因此, 对于已获得相应学分、证书的学生, 在我校可以直接升入二年级进行专业学习; 大多数学生则是进入一年级进行基础课学习, 主要课程包括语言课程、基础数学课程和专业相关的预备课程。

第二年

核心课程

动物、植物和微生物的生物多样性
实验设计与分析
细胞和分子生物学
生命的化学原理
微生物生物学
生物化学导论
进化与遗传学导论
分子生物学技术
生态学导论
面向科学的人工智能导论
科学领域的创业教育: 面向未来的创新

第三年

核心课程

生化方法
高级遗传学
细胞生物学技术
实用生物信息学
蛋白质的作用

UNDERGRADUATE

BSc Biological Sciences 生物科学

Biology is one of the most exciting scientific disciplines of the 21st century. The insights it provides into life processes, together with recent advances in genomics, diagnostics and therapeutic drug development, are having a major impact on humanity.

The BSc Biological Sciences programme provides you with a comprehensive introduction to the biosciences, equipping you with knowledge and skills in a range of areas, from bioinformatics and biotechnology, to cell signalling, genomics, and structural biology.

This programme is one of the first in the world to be awarded international accreditation by the Royal Society of Biology.

生物学是21世纪最令人兴奋的科学学科之一。它对生命过程的见解, 以及基因组学, 诊断学和治疗药物开发的最新进展, 正在对人类产生重大影响。

本专业课程提供全面的生物科学入门知识, 使学生具备从生物信息学和生物技术到细胞信号, 基因组学和结构生物学等各个领域的知识和技能。

本专业是目前世界上第一批获得英国皇家生物学会认证的生物学本科专业之一。

XI'AN JIAOTONG-LIVERPOOL UNIVERSITY 西交利物浦大学

Xi'an Jiaotong-Liverpool University is an international joint venture university founded by Xi'an Jiaotong University in China and the University of Liverpool in the United Kingdom. As an independent Sino-foreign cooperative university, it captures the essence of both prestigious parent universities and is the first and only one of its kind approved by the Ministry of Education in China.

西交利物浦大学是经中国教育部批准, 由西安交通大学和英国利物浦大学合作创立的, 具有独立法人资格和鲜明特色的新型国际大学。



开始时间
每年9月



学院
生命与自然科学学院



2+2 留学模式
可选



学位证书
西交利物浦大学
生物科学



学制
四年

利物浦大学
BSc Biological Sciences
(hons,4+0)



学习地点
苏州

BSc Biochemistry
BSc Genetics
BSc Microbiology
BSc Biological Sciences
(hons,2+2)



教学形式
全日制

可选课程

基因组表达和维护
医学微生物学与病毒学
细胞信号转导
生物化学导论
生物技术
生物分子的结构和动力学
流行病学
全球健康与社会
公共健康的传染性与非传染性疾病
自然科学初级统计学

第四学年

核心课程

毕业设计
分子免疫学
科学研究中的批判思维和应用技术

可选课程

疾病生物学
生化信使
生物技术与社会
基因表达和基因组分析
蛋白质结构和功能
高通量方法和系统生物学