

BSC

ENVIRONMENTAL

SCIENCE

环境科学

XJTLU | BSC ENVIRONMENTAL SCIENCE

## CAREERS

More than 90% of graduates pursue further MS and/or PhD education at top ranked international Universities. Graduates from this programme will be well-prepared for positions such as environmental consultant, governmental policy maker, environmental impact assessment specialist, laboratory scientist, geographic information systems analyst, ecosystem restoration engineer, environmental education officer, green technology specialist, Environmental health and safety (EHS) officer.

## MODULES

### YEAR ONE

UK degrees are three years long whereas in China they are four, therefore we do accept students with certain qualifications directly into Year Two, which is the start of the main academic programme. Most students, however, enter into Year One, which provides you with a range of interesting modules, language classes and core skills for your degree. Students need to choose between two options for Years Three and Four, either Environmental Pollution or Ecology Streams.

### YEAR THREE

#### environmental pollution stream:

- STATISTICS I
- REMOTE SENSING
- AIR AND THE ENVIRONMENT
- ENVIRONMENTAL INSTRUMENT ANALYSIS
- STATISTICS II
- RESEARCH DESIGN
- WATER AND THE ENVIRONMENT
- SOIL AND THE ENVIRONMENT

#### ecology stream:

- STATISTICS I
- REMOTE SENSING
- MICROBIAL ECOLOGY
- BIOGEOCHEMISTRY & GLOBAL CHANGE
- STATISTICS II
- RESEARCH DESIGN
- AQUATIC ECOLOGY
- TERRESTRIAL ECOLOGY

### START DATE

September 2023



### ATTENDANCE

Full time



### DURATION

Three or four years



### SCHOOL

School of Science



### 2+2 STUDY

Available



### QUALIFICATION

XJTLU  
BSc Environmental Science



### LOCATION

Suzhou

University of Liverpool  
BSc Environmental Science

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

# BSC ENVIRONMENTAL SCIENCE

The BSc in Environmental Science programme gives you an understanding of the natural world and environmental problems caused by development. The programme combines biology, chemistry, earth sciences, mathematical, statistical and GIS methods into one subject. Specialized teams of experts work in biogeochemistry and environmental chemistry; soil, plant and animal ecology; and physical geography and geomorphology.

## KNOWLEDGE AND SKILLS

By the time you graduate from the BSc in Environmental Science, you will have:

- Problem-solving competencies across the major programme focus areas of ecological, geophysical and chemical systems
- The ability to demonstrate a high degree of scientific literacy, including an understanding of how scientific knowledge is constructed in the programme focus areas
- A firm grasp of fundamental and applied scientific perspective and a proficiency in laboratory- and field-based analysis
- The ability to communicate to scientists and the public about regional and global issues and their relationship to society from a scientific perspective, promoting multicultural understanding of environmental issues and their importance.

## WHY SHOULD I STUDY ENVIRONMENTAL SCIENCE AT XJTLU?

- Use a hands-on approach to learn the science of environmental processes at a range of scales, from local and regional to national and global
- Gain knowledge from research-led teaching with emphasis on research in areas where humanity faces severe challenges, such as biodiversity loss, climate change and disruption of the earth's chemical cycles
- Uncover the complexities in environmental decision-making and discover ways to engage in environmental management as you gain insights from industry leaders and non-governmental organizations
- Take advantage of new purpose-built laboratories (20 million RMB) designed to support lab practicals and undergraduate research and learn sophisticated laboratory techniques and data analysis, such as use of Geographical Information Systems
- Earn two degrees: an XJTLU degree from the Chinese Ministry of Education and a globally recognized degree from the University of Liverpool, a member of the Russell Group of leading UK universities.



# 环境科学

西浦环境科学专业是学校的自然科学专业之一。通过环境科学专业的本科学习，学生能够系统地掌握地质环境和生态系统的复杂性，探索全球范围内环境演变的过程及规律，培养解决环境问题的能力。

## 知识与技能

本专业毕业生将具备以下能力：

- 运用生态学、地球物理学、化学等学科知识解决环境问题
- 具备较高的科学素养，理解本专业中各学科的科学知识是如何构建的
- 扎实掌握基础科学和应用科学的相关观点，精通基于实验室和基于现场考察的研究分析
- 能够站在科学的角度介绍区域性和全球性问题及其与社会的关系，无论对象是科研人员还是社会公众，从而促进各群体对于环境问题及其重要性的跨文化理解

## 专业特色

- 在实践操作的过程中学习有关当地、全国乃至全球范围内环境进程的科学知识
- 从研究导向型教学中汲取知识，尤其是在人类面临严重挑战的领域，如生物多样性丧失、气候变化以及地球的化学物质循环遭破坏等
- 了解环境政策决策的复杂性，从行业领袖和非政府组织那里获取见解，并探索参与环境管理的方法
- 本专业耗资1700万元人民币新建的实验室，支持学生的实验室实践和本科生研究项目，包括学习复杂的实验室技术和数据分析技能
- 毕业生可同时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英国利物浦大学学位

## 就业

毕业生可胜任的工作岗位包括：环境顾问、环境政策领域的公务员、环境影响评估专家、实验室科研人员、地理信息系统分析师、生态系统修复工程师、环境教育人员、环保科技专家、企业环境健康与安全专员等。

## 课程

### 第一学年

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，对于已获得相应学时、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学习，包括众多有吸引力的课程，语言课程以及专业学习相关的核心技能学习。

本专业有两个方向：环境污染和生态学。课程设置也有所不同，学生可以根据自己的爱好进行选择。

### 第三学年

#### 环境污染方向：

统计学 I
环境遥感
大气与环境
环境仪器分析
统计学 II
研究设计
水与环境
土壤与环境

#### 生态学方向：

统计学 I
环境遥感
生物地球化学及全球变化
微生物生态学
统计学 II
研究设计
水生生态学
陆地生态学

### BSC ENVIRONMENTAL SCIENCE 环境科学

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You will learn to apply problem-solving skills to some of the greatest challenges facing humanity today. Furthermore, you will gain field skills through participating in international field trips in coastal and mountain environments, learning about surveying and interviewing key community stakeholders.

本专业帮助学生全面了解自然世界和环境问题，系统掌握地质环境和生态系统的复杂性，探索全球范围内环境演变的过程及规律，培养解决环境问题的能力。

该专业将生物学、化学、数学、统计方法及地球科学融为一体。专业教师队伍包含生物地球化学和环境化学，土壤、植物和无脊椎动物生态学，自然地理学和地貌学等领域的专家学者。

学生将学习如何从解决问题的角度应对当今人类所面临的重大挑战。学生还将通过参与国际考察项目，深入了解沿海和山地环境等不同生态类型，学习调查和访问当地社区的利益相关方，从而累积丰富的实地考察技能。

 <b>开始时间</b> 2023年09月	 <b>教学形式</b> 全日制
 <b>学制</b> 四年	 <b>学院</b> 理学院
 <b>2+2 留学模式</b> 可选	 <b>学位证书</b> 西交利物浦大学 环境科学
 <b>学习地点</b> 苏州	<b>利物浦大学</b> BSc Environmental Science

### 第二学年

实验室研究技能 I
野外研究技能 I
环境污染
生态、演化及地球系统
实验室研究技能 II
野外研究技能 II
科研基础技能
地理信息系统

### 第四学年

#### 环境污染方向：

毕业设计
人类与环境污染
环境影响评价
科技阅读、评审与写作
环境工程
环境修复和整治野外课程
环境管理

#### 生态学方向：

毕业设计
环境与社会
环境影响评价
科技阅读、评审与写作
管理下的生态系统：农业与城市
环境修复和整治野外课程
环境管理