

BSC

ACTUARIAL

SCIENCE

精算学

XJTLU | BSC ACTUARIAL SCIENCE



START DATE
September 2021



ATTENDANCE
Full time



DURATION
Three or four years



SCHOOL
School of Science



2+2 STUDY
Available



QUALIFICATION
XJTLU
BEcon Actuarial Science



LOCATION
Suzhou

University of Liverpool
BSc Actuarial Science
(hons,4+0)

BSc Actuarial Mathematics
BSc Mathematics with Finance
(hons,2+2)



BSC ACTUARIAL SCIENCE

The BSc Actuarial Science programme is designed for students who are keen on solving real world problems involving risk and uncertainty using mathematical tools. You will learn how to predict future uncertainty, and analyse and evaluate potential risks.

CAREERS

"Actuaries measure and manage risk. Actuaries have a deep understanding of mathematics, statistics and business management. With this, they help businesses grow and provide value to their customers. Actuaries help leaders make strategic decisions and consumers prepare for their future." --Society of Actuaries

Being an actuary or actuarial employee, you have the chance to apply the skills and knowledge you learned in mathematics and statistics to analyze and manage the risks in the real-world challenges, such as New Technologies, Climate Change, Population Growth, Artificial Intelligence, Big Data, Cryptocurrency.

Your career opportunities and fields you will likely enter in the future include: Banking and Financial Services, Consulting, Demography, Enterprise Risk Management, Environmental Finance, Health and Retirement, Investments and Fund Management, Pension, Predictive Analytics and Data Science, Pricing, Reinsurance, Social Insurance, Valuation, Wealth Management and Financial Planning.



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.

YEAR THREE

Compulsory modules:

LIFE INSURANCE MATHEMATICS I

INTRODUCTION TO STATISTICAL METHODS

STATISTICAL DISTRIBUTION THEORY

INTRODUCTION TO FINANCIAL MATHEMATICS

LIFE INSURANCE MATHEMATICS II

MATHEMATICAL RISK THEORY

Optional modules:

ECONOMETRICS I

FINANCIAL REPORTING I

SECURITY MARKETS

MACROECONOMICS II

YEAR TWO

Compulsory modules:

INTRODUCTION TO FINANCIAL ACCOUNTING

PRINCIPLES OF MICROECONOMICS

INTRODUCTION TO PROBABILITY AND STATISTICS

THEORY OF INTEREST

FOUNDATIONS OF FINANCIAL COMPUTING

PRINCIPLES OF MACROECONOMICS

INTRODUCTION TO FINANCE

Optional modules:

ADVANCED LINEAR ALGEBRA

ANALYSIS I

YEAR FOUR

Compulsory modules:

STOCHASTIC MODELING IN INSURANCE AND FINANCE

LOSS DISTRIBUTION

LINEAR STATISTICAL MODELS

FINAL YEAR PROJECT

CREDIBILITY THEORY

APPLIED PROBABILITY

Optional modules:

ECONOMETRICS OF TIME SERIES

INTERNATIONAL TRADE

KNOWLEDGE AND SKILLS

"We have a professional team with members, full of working experience, affiliated to IFoA, SOA, CAS and ACCA and other actuarial societies. We are dedicated to support actuarial students with advice and up-to-date actuarial news through classes, academic and social events, student and employer events."

The BSc Actuarial Science will equip you with knowledge and understanding of the concepts, theories and models of actuarial science, through a series of modules including calculus, algebra, probability theory and statistics, business economics, accounting and corporate finance.

The skills you gain on the Actuarial Science undergraduate course will kickstart your actuarial career. These skills include

- Critical thinking and analysis
- Problem solving
- Numeracy and data analysis
- Mathematical reasoning
- Communication, presentation and reporting to specialist and non-specialist audiences

WHY SHOULD I STUDY ACTUARIAL SCIENCE AT XJTLU?

- **The actuarial profession is both challenging and hugely rewarding.** Financially and statistically trained actuaries are highly in-demand in the insurance industry as well as in a wide range of other profit and non-profit sectors.
- **Earn two BSc titles:** 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.
- **The BSc Actuarial Science is accredited by various actuarial societies, including the Institute and Faculty of Actuaries (IFoA), UK as well as the VEE and UCAP from the Society of Actuaries (SOA), North America.**
- **Profit from the research-led teaching environment at XJTLU, located in Suzhou, close to China's financial center Shanghai, with opportunities to undertake internships and work placements at Fortune 500 companies.**
- **Access to a variety of resources from academic and professional platforms, including Intelligent Computing and Financial Technology Laboratory (ICFT), Research Institute of FinTech (RIFT) and University Library for Statistics and Actuarial Science.**
- **Powerful support of professional advice and up-to-date actuarial development from our professional team with members affiliated to IFoA, SoA, CAS and ACCA and other actuarial societies.**

精算学

西浦精算学专业旨在培养学生如何系统地运用数学与统计方法分析金融报表, 评估风险, 设计精算模型等, 探索如何更好地考虑金融经济因素等定量地管理与控制风险, 以及开发新保险产品等。

知识与技能

- 我们拥有一支由英国精算师学会 (IFoA), 北美精算师学会 (SOA), 北美财产与意外险精算师学会 (CAS), 国际注册会计师 (ACCA) 以及其他精算协会组成的专业团队, 其成员具有丰富的工作经验。我们致力于通过课堂, 学术和社交活动, 学生和就业活动为精算学生提供建议和最新的精算要闻。
- 精算学专业开设一系列课程, 包括微积分, 代数, 概率论与统计, 商业经济学, 会计和公司财务等, 理解并掌握精算科学所涉及到的概念, 理论和模型, 由此获得精算师所具备的批判性思维与分析能力; 提出并解决问题能力; 数值与数据分析能力; 数学推理能力; 与业内外人士交流和专业报告技能等。

专业特色

- 精算行业既具有挑战性, 又具有巨大的回报。当今急需大量的受过金融和统计培训的精算师从事保险业以及其他许多利润和非盈利行业
- 精算学专业已获得包括英国精算师协会的认证 (2+2模式) 以及北美精算师协会大学精算课程 (UCAP) 以及 VEE 课程免试资格认证
- 西交利物浦大学研究导向型的教学环境将丰富学生的学习经验
- 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
- 西交利物浦大学提供了丰富的专业性、学术平台、资源, 包括智能计算与金融技术实验室 (ICFT), 金融科技研究院 (RIFT) 和大学统计与精算科学图书馆
- 西交利物浦大学位于苏州, 靠近中国金融中心——上海, 便于学生参与财富500强企业的实习与工作
- 我们拥有一支由英国、美国等专业化精算协会组成的专业团队, 其成员具有丰富的工作经验, 为精算学生提供职业建议和最新的精算发展动态

就业

“精算师的职责是测量和管理风险, 他们对于各种数学, 统计和商业管理的知识都具有深刻的理解。精算师可以帮助企业增长并为客户提供价值, 他们可以帮助领导者做决策和未来规划。” ——北美精算协会

本专业毕业生具有成为精算师的基本知识与技能, 将获得的数学和统计技能应用到现实世界中的各种挑战中, 包括新技术、气候变化、人口增长、人工智能和大数据分析、与加密货币有关的风险、与国民经济有关的不确定性, 可在包括保险、银行、医疗、政府在内的许多机构中工作。

近年来, 随着精算技能的价值被更广泛地认可, 精算学专业的职业领域从传统领域进一步延伸到包括数据科学和企业风险管理等诸多新兴领域中。毕业生将具备在以下领域中任职和发展学习的能力和机会: 银行和金融服务、咨询、人口学、企业风险管理、环境金融、健康和退休保险、投资与基金管理、养老金、预测分析和数据科学、产品定价、再保险、社会保险、企业估值、财富管理和财务规划。

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。

第三学年

必修课:

- 寿险精算学I
- 统计方法概论
- 数学风险理论
- 统计分布理论
- 金融数学基础
- 寿险精算学II

选修课:

- 经济计量学
- 财务报表I
- 证券市场
- 宏观经济学II

 开始时间 2021年09月	 学院 理学院
 2+2 留学模式 可选	 学位证书 西交利物浦大学 精算学学士
 学制 四年	利物浦大学 BSc Actuarial Science (hons, 4+0)
 学习地点 苏州	BSc Actuarial Mathematics BSc Mathematics with Finance (hons, 2+2)
 教学形式 全日制	

第二学年

必修课:

- 利息理论
- 金融会计基础
- 微观经济学原理
- 金融计算学基础
- 统计学基础
- 宏观经济学基础
- 金融学基础

选修课:

- 高等线性代数
- 数学分析

第四学年

必修课:

- 信度理论
- 损失分布
- 线性统计模型
- 随机模型在保险与金融的应用
- 应用概率
- 毕业设计

选修课:

- 时间序列计量经济学
- 国际贸易

BSC ACTUARIAL SCIENCE 精算学

Actuaries possess unique mathematical, analytical, communication and management skills for many high-level strategic decisions with a significant impact on legislation, businesses and peoples' lives. They are active not only in insurance, but also in finance and investment.

The BSc Actuarial Science will pave you a way to an actuary, whose daily routine includes: investigating financial accounts, analysing risks, designing actuarial models, and cooperating with other professions. This programme covers a series of modules of Core Principles from the Institute and Faculty of Actuaries UK, and has acquired several exemptions from various international actuarial societies, e.g, SoA.

On completion, you will be a multi-faceted and highly employable graduate. With the skills acquired, you will be highly valued in the insurance industry, as well as many other fields that call for an advanced mathematics degree and problem-solving ability.

精算师具有独一无二的数学, 分析, 沟通和管理等技能。其所做的高层次战略决策, 对立法, 企业和人民的生活等都会产生重大影响。精算师不仅仅活跃于保险业, 在金融与投资业中也常见其身影。

通过本专业的学习, 毕业生对日常精算技能有一定的掌握, 如分析金融报表, 评估风险, 设计精算模型, 并与各行业专家进行协作。该专业设置的课程涵盖英国精算师学会的初级专业考试科目, 并取得了其他国际精算协会的相关免考。

毕业生具有精算专业和其他许多专业所需的数学能力和解决问题的技能。毕业生得到全面发展, 可就业于金融、保险、政府、医疗等各行各业。

