

BENG

TELE-

COMMUNICATIONS

ENGINEERING

通信工程

XJTLU | BENG TELECOMMUNICATIONS ENGINEERING

CAREERS

Graduates will be well prepared for positions in fields including the design and development of telecommunication technologies and the maintenance and upgrade of telecommunications infrastructure.

The programme will also provide a sound basis for further studies at masters and PhD levels.

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

CMOS DIGITAL INTEGRATED CIRCUITS

CONTINUOUS AND DISCRETE TIME SIGNALS AND SYSTEMS

DIGITAL ELECTRONICS II

ADVANCED ELECTRICAL CIRCUITS AND ELECTROMAGNETICS

ELECTRONIC CIRCUITS AND SYSTEMS

ENGINEERING MATHEMATICS III

ANALOGUE & DIGITAL COMMUNICATIONS I

ENERGY CONVERSION AND POWER SYSTEMS

INDUSTRIAL AWARENESS AND GROUP PROJECT

MICROPROCESSOR SYSTEMS

RF ENGINEERING AND APPLIED ELECTROMAGNETICS

INSTRUMENTATION AND CONTROL SYSTEM

START DATE
September 2021

2+2 STUDY
Available

DURATION
Three or four years

LOCATION
Suzhou

SCHOOL
School of Advanced Technology

ATTENDANCE
Full time

QUALIFICATION
XJTLU
BEng Telecommunications Engineering

University of Liverpool
BEng Telecommunications Engineering(hons,4+0)

BEng Electrical and Electronic Engineering (Electronic Engineering and Communications Pathway) (hons,2+2)

YEAR TWO

Compulsory modules:

C PROGRAMMING & SOFTWARE ENGINEERING I

ELECTRICAL CIRCUITS I

ELECTRONIC CIRCUITS

ENGINEERING MATHEMATICS I

DIGITAL ELECTRONICS I

ELECTROMAGNETISM AND ELECTROMECHANICS

INTEGRATED ELECTRONICS AND DESIGN

EXPERIMENTAL, COMPUTER SKILLS AND SUSTAINABILITY

ENGINEERING MATHEMATICS II

Optional modules:

C++ PROGRAMMING & SOFTWARE ENG. II

ENGINEERING DRAWING

YEAR FOUR

Compulsory modules:

ANALOGUE & DIGITAL COMMUNICATIONS II

INFORMATION THEORY AND DATA COMMUNICATIONS

FINAL YEAR PROJECT (PHASE I & II)

WIRELESS SYSTEMS

Optional modules:

ANTENNAS

ELECTRONICS FOR COMMUNICATIONS

ELECTRONICS FOR INSTRUMENTATION

DIGITAL SYSTEM DESIGN WITH HDL

RADIO PROPAGATION AND MICROWAVE CIRCUITS

EMBEDDED COMPUTER SYSTEMS

PHOTONICS AND OPTICAL COMMUNICATION SYSTEMS

IMAGE PROCESSING

SIGNAL PROCESSING AND DIGITAL FILTERING

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

BENG TELE-COMMUNICATIONS ENGINEERING

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KNOWLEDGE AND SKILLS

By the time you graduate from the BEng Telecommunications Engineering, you will have:

- Extensive experience in the application of modelling and analytical methods
- The ability to use IT tools and computer-aided design systems for modelling, analysis, simulation and design
- The ability to recognise the limitations of principles, models, analyses and methodologies
- The skills to design a system, component or process based on initial requirements and constraints

WHY SHOULD I STUDY TELECOMMUNICATIONS ENGINEERING AT XJTLU?

- Study the electronics of wireless communications and optical communications technologies for employment in a growing field;
- Enjoy use of fully equipped electromagnetism and telecommunications laboratories, as well as the integrated circuit design and power systems modules;
- Tailor the programme to your own academic and research interests through a wide range of optional modules;
- Study a curriculum that incorporates the latest technological innovations and developments;
- Earn two degrees: an XJTLU degree from the Chinese Ministry of Education and an IET accredited recognised degree from the University of Liverpool, a member of the Russell Group of leading UK universities.



通信工程

本专业为学生在通信工程方面的学习奠定基础，并掌握该领域前沿的新兴科技。学生将学习并掌握现代电子及通讯领域设计、实现、测试及工业应用的相关知识。

知识与技能

本专业毕业生将具备以下能力：

- 熟练熟练掌握建模和分析方法的应用
- 能够用工具软件和CAD系统建模、分析、模拟和设计集成电路
- 认识到原理、模型、分析和各种方法的局限性
- 能够根据原始需求与限制条件设计系统、组件和程序

专业特色

- 本专业主要覆盖无线通信、光纤通信技术和日新月异的移动通讯系统技术，为毕业生在飞速发展的行业中就业打下坚实基础
- 本专业拥有设备完善的电子电路实验室、单片机实验室、通讯实验室、射频微波实验室等，学生可自己预约时间充分利用
- 提供众多选修课程，有利于学生根据自己的学术和研究兴趣加以选择
- 课程设置结合最新技术创新和发展、与时俱进
- 毕业生可获得中国教育部认可的西交利物浦大学学位和IET认证的利物浦大学学位

就业

毕业生在通信与电子系统行业具有广泛的就业机会，可完成最新通信技术的设计与开发，维护和升级现有通信设施等工作，可从事通信研发工程师、通信工程师、软硬件技术支持工程师、技术支持工程师等岗位。

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

CMOS集成电路
连续和离散时间信号与系统
数字电子学 II
进阶电路与电磁学
电子电路与系统（高频电子线路）
工程数学 III
模拟与数字通信 I
能源转换与电源系统
产业意识与团队项目
微处理器系统
射频工程及应用电磁学
仪器测量及控制系统

开始时间
2021年09月

学院
智能工程学院

2+2 留学模式
可选

学位证书
西交利物浦大学
通信工程

学制
四年

利物浦大学
BEng Telecommunications
Engineering(hons,4+0)

学习地点
苏州

BEng Electrical and
Electronic Engineering
(Electronic Engineering and
Communications Pathway)
(hons,2+2)

教学形式
全日制

第二学年

C语言编程及软件工程 I
电路 I
电子电路（模拟电子电路）
工程数学 I
工程数学 II
数字电子学 I
工程电磁学及电机机械
集成电子学及设计
实验技能与可持续性
C++编程及软件工程 II
工程制图

第四学年

模拟与数字通信 II
信息论与数据通信
无线通信系统
毕业设计

选修课程：

天线理论
通信电子学
仪器电子学
HDL数字设计
电波传输及微波电路
嵌入式系统
光电子学和通信系统
图像处理技术
信号处理与数字滤波

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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。