



## Contact us

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University of Nottingham has made every effort to ensure that the information in this brochure was accurate when published. Please note, however, that the nature of the content means that it is subject to change from time to time, and you should therefore consider the information to be guiding rather than definitive.

Updated in October 2019 by FM



## Faculty of **Science and Engineering**

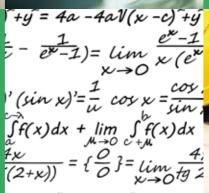
**University of Nottingham Ningbo China** 





**Design it** 







Calculate it

**Build** it

## It starts here,

## where it goes is up to you

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We endeavour to provide a world-class research-led science, technology, engineering and mathematics education



Introduction

# Get ready for something extraordinary

The University was opened in 2004 and is located in the city of Ningbo, on the east coast of China.

Established in 2009, the Faculty of Science and Engineering currently has around 2,400 students from at least 40 countries.



The Faculty is the home for

11 research groups

Academics from over **30 countries** 

around the world



Summer research placement programmes are open for all



98% of our research is of international quality

88% graded as 'world-leading' or 'internationally excellent'



The faculty's academics published more than

258 journal publications

indexed by Scopus and SCI in 2018

We are International and Sport University of the Year

The Times and The Sunday Times Good University Guide 2019



THE SUNDAY TIMES
THE SUNDAY TIMES
GOOD
UNIVERSITY
GUIDE
2019

SPORTS UNIVERSITY OF THE YEAR

Ranked as a

World
Top 100
University

QS World University Rankings 2020



The TEF Panel judged that the University of Nottingham delivers consistently outstanding teaching, learning and outcomes for its students.

## **Engineering Discipline**

ranks internationally

**Top 1%** 

in the latest ESI report



15 of our outstanding scientists

appointed as Chair Professors in the science and engineering disciplines The faculty's academics and research staff successfully received 28m RMB projects by 2018

from domestic governments, industry collaborators and international bodies.

Study abroad and exchange

Opportunities to study with

100 partner universities

## Welcome to University of Nottingham Ningbo China

A Russell **Group British** China

## University in Ningbo

## **Our University**

- The University of Nottingham Ningbo China (UNNC) is part of the University of Nottingham, based in the UK.
- The University of Nottingham has been consistently ranked as a world top 100 university by the QS World University Rankings.
- At UNNC we welcome students from a range of backgrounds and cultures. As a student here, you will be part of a thriving community of over 7,800 students from more than 70 different countries and regions. You will develop a global perspective that is attractive to employers.

## **Our DNA**

- All our degree programmes are taught in English, and exams and assignments are submitted in English. All aspects of the degree are also written in English, including the curriculum and course
- You will graduate with a degree from the University of Nottingham issued by the Registrar and the Vice-Chancellor in the UK.
- You'll directly engage with research-led teaching, an international environment, and quality teaching environments.
- Our teaching is subjected to the same quality assurance processes as the UK campus, and our programmes are accredited by prominent, professional UK institutions.
- Our academic staff are world renowned experts in their field, and are recruited from top universities from around the world.
- We have over 750 international students from more than 70 different countries and regions worldwide.







## **Dean of Faculty** of Science and **Engineering**

## The Dean's message

## Global leader in STEM education

Welcome to the Faculty of Science and Engineering. We strive to be a global leader in engineering and science education and research. We have expert UK scholars, well-trained international staff, a global footprint, multi-disciplinary opportunities, and 9 research-led academic departments and schools.

## Think outside the box

UNNC is uniquely placed in the world's most vibrant, and arguably most important, economy. Its experts are focused on conducting internationally excellent research that meets China's national, regional and local priorities. Ningbo is conveniently linked by air to Beijing, Guangzhou and Hong Kong, with Shanghai under two hours away by train.

## Join the community

Your student experience will be enhanced by a University of Nottingham alumni network of 270,000 people worldwide. We also receive generous financial support from the Ningbo government, which provides us with a range of new resources for the UNNC Engineering and Science Scholarships, professorships, and state-of-the-art facilities.

Professor Tao Wu **Professor of Chemical Engineering** Dean of Faculty of Science and Engineering



Faculty of Science and Engineering (FoSE) video

## **About** the faculty

## Be your future employer's first choice

At FoSE, our reputation for excellence in science and engineering is underpinned by internationally leading research and the highest quality of teaching.\* Our students are taught by experienced academics who are leaders in their field. Their expertise is reflected in our teaching, and brings a unique advantage to our undergraduate degrees which are respected and valued by industry and commerce worldwide.

We offer the right balance of classroom lectures and 'hands on' practical experience in our workshops and labs - all of which are fitted with the most up-to-date facilities. We work closely with the industry outside of the University - this ensures our students have opportunities to get involved with real engineering challenges. Our students will gain first-hand experience of engineering as a career, which ensures they leave us with the skills and knowledge that employers want.

## **Teaching and progression**

Students can select from the range of undergraduate courses shown on the following pages. Initially, all these degrees follow a standard series of modules which provide a broad view of the subject. Students will begin to specialise in their chosen field part-way through year two.

The degree is offered as a three or four-year programme depending on your entry qualification. Students have the option to study the whole course in China or spend their last two years at the University of Nottingham, UK.

Our teaching is delivered through lectures, which are supported by smaller tutorials and seminars. There are plenty of opportunities for hands-on practical sessions in our extensive engineering laboratories.

Assessment is based on course work and project work, examinations, and individual essays and presentations.

Successful undergraduate students graduating from the University of Nottingham will be awarded an accredited BEng or BSc degree. Students may be able to progress on from these courses, providing all the standard course requirements are satisfied.

## **Career opportunities**

A degree in science or engineering from the University of Nottingham will provide you with skills for professional life, and will add value to your applied science training. As well as offering the experience of working on real-world problems, students are taught communication and teamwork skills, entrepreneurship and IT techniques, use of management tools, and business principles. There are also plenty of opportunities to explore problems in a creative and innovate way.

Our graduates learn valuable skills that international, bluechip employers look for. A degree in engineering will open doors to a variety of career opportunities either within the engineering sector or in other industries, such as consultancy, finance, IT, commerce and education.

Discover

#FoSE

## Connect with us





o unnc\_fose



unncfose



## World-changing research



More information

Our research groups

## **Advanced Energy and Environmental Materials** and Technologies

Head of Research Group **Professor Tao Wu** 

## **Advanced and Intelligent** Manufacturing

Head of Research Group **Professor Dragos Axinte** 

## **Artificial Intelligence and Optimisation**

Head of Research Group **Professor Ruibin Bai** 

## Composites

Head of Research Group Professor Xiaosu Yi

## Geospatial and Geohazards

Head of Research Group Assoc. Professor Craig Hancock

## Fluids and Thermal **Engineering**

Head of Research Group **Professor Yuying Yan** 

## **Natural Resources and Environment**

Head of Research Group Assoc. Professor Jun He

## **Partial Differential Equations**

Head of Research Group **Professor Behrouz Emamizadeh** 

## **Power Electronics, Machines and Control** Head of Research Group

**Professor Chris Gerada** 

## Sensor Networks. Instrumentation, Data **Analytics**

Head of Research Group **Professor Vladimir Brusic** 

## **Sustainable Built Environment**

Head of Research Group: TBC







unnc\_fose



\*TEF Gold Award

## Meet our Chair Professors

The Faculty of Science and Engineering has 15 Chair Professors, appointed across a range of key research areas including Marine Economics, New Materials and business innovation. The Chair Professors are the world leading scientists and researchers who support the University in key initiatives which advance the teaching, research, knowledge exchange, and global engagement.



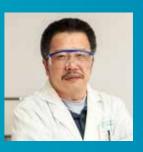




Professor Dragos Axinte
Li Dak Sum Chair Professor in
Manufacturing Engineering



Professor Adam Clare
Li Dak Sum Chair Professor in
Additive Manufacturing



I FosE

**Professor George Chen**Li Dak Sum Chair Professor in
Electrochemical Technologies



Professor Zhikuan Chen
Chair Professor in Advanced
Electronic Materials and Devices



Professor Mike George
Li Dak Sum Chair Professor
in Chemistry



Professor Nicholas Warrior
Li Dak Sum Chair Professor in
Light-weight Structure



Professor Jim Greer
Li Dak Sum Chair Professor in
Advanced Electronic Materials
and Devices



**Professor Guang Zhu**Li Dak Sum Chair Professor in Nanomaterials and Devices



Professor Pat Wheeler
Li Dak Sum Chair Professor in
Electrical Engineering and
Aerospace



Professor Ping Cui
Li Dak Sum Chair Professor in
Advanced Materials



Professor Serhiy Bozhko
Li Dak Sum Chair Professor in
Aircraft Systems Modelling
and Design



Professor Thomas
Meersmann
Li Dak Sum Chair Professor in
Translational Imaging



Professor Vladimir Brusic
Li Dak Sum Chair Professor in
Computer Science



Professor Xiaosu Yi Li Dak Sum Chair Professor in Advanced Materials and Composites



Professor Yuying Yan
Li Dak Sum Chair Professor in
Thermofluid Engineering

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## **BEng (Hons) Architectural Environment Engineering (2+2, 4+0)**

## **Programme summary**

Architectural Environment Engineering

This degree is offered as a three or four year programme depending on your entry qualification. It has been accredited by the Chartered Institution of Building Services Engineers (CIBSE).

Architectural environment engineers create comfortable and efficient indoor environments using modern technologies and sustainable design. This forward-looking and challenging course is built on traditional engineering foundations. It addresses the increasing need for highly qualified engineers who can take a holistic approach to designing architectural environments for a low-carbon future.

## **Typical modules**

- Fluid Mechanics and the Built Environment
- Thermofluids
- Environmental Design
- Electricity and the Built Environment
- Architectural Engineering Design
- **Building Information Modelling and Management**
- Environmental Performance Modelling

### Careers

Graduates of this course are sought after by international engineering consultancies, for example:

- Arup
- AECOM
- WSP
- Glumac
- ECADI

They apply their skills to design occupant-focused, energy-efficient buildings. They will be equipped to take a central role in the development of strategies for sustainability, and to advise on improvements to the energy and sustainability performance of buildings.



This programme is accredited by the **Chartered Institution** of Building Services **Engineers (CIBSE)** 

## **Programme summary**

The course is based on creativity and technical rigour, with the design studio at its heart. In years two and three, students can choose which studio unit they would like to work in - each has its own style, way of working and skills. We also offer students the opportunity of a one-semester exchange to a wide range of universities overseas.

BEng (Hons) Architecture (4+0)

## **Typical modules**

- Architectural Design Studio
- Tectonics
- Integrated Design in Architecture
- Architectural Humanities
- Urban Design Theory
- Building Information Modelling and Management
- Environmental Science for Architects

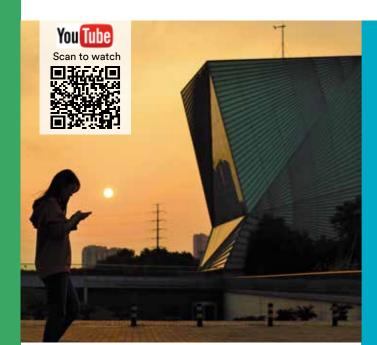
Architecture graduates from UNNC have chosen to work in well-known international architectural design firms in China.

## Careers

Our BEng Architecture degree has long been considered a leading course of its type in the UK. There is an extensive network of alumni employed in most leading UK and international practices. The majority of our graduates will continue with careers in architecture, while others move on to further studies and research. Many architecture graduates from UNNC have chosen to work in well-known international architectural design firms in China and abroad such as Chapman Taylor, PTW, SHL, ALL Design, DNA, CCDI, ECADI, CallisonRKTL, KPF and NAN Architects. Many graduates choose to study further in world renowned architectural schools, such as UCL, the University of Edinburgh, the University of Michigan and the University of Melbourne.

## RIBA \*\*\*

This programme is accredited by the Royal Institute of British **Architects (RIBA Part 1)** 



For more detailed course content, visit nottingham.edu.cn/abe



Jiayi Qiu, who studied Architectural **Environment Engineering and graduated in** 2014, has been named among 11 Chinese people who are inspiring the world by Phoenix TV, a Hong Kong-based TV network. Jiayi was given his award in recognition of being the first student from outside the UK or Ireland to be awarded a President's Award from the Chartered Institution of Building Services Engineers (CIBSE).



**Dr Ali** Cheshmehzangi

Associate Professor of Architecture and Urban Design Head of Department, Architecture and Built Environment Director of Centre for Sustainable **Energy Technologies** 

**66** Treating the students individually and responding to their learning needs are central to our teaching philosophy. We simply strive for the best! 99



For more detailed course content, visit nottingham.edu.cn/abe

## BEng (Hons) Chemical Engineering (2+2, 4+0)

## **Programme summary**

Chemical engineering is the processing of materials on a commercial scale to make useful and valuable products. By the time you graduate, you will have the expertise to work at a professional level in a range of industries including energy, oil and gas, pharmaceutical, food and evironmental services.

### This programme:

Chemical Engineering

- introduces fundamental engineering sciences including heat and mass transfer and fluid mechanics
- equips students with professional skills needed to design chemical engineering processes
- is awarded the Provincial '12th Five Year Plan' Emerging Featured Course and Provincial First Class Discipline

## **Typical modules**

- Chemistry For Engineers
- Thermodynamics And Heat Transfer
- Plant Design
- Process Engineering Project
- Reactor Design
- Biochemical Engineering

### Careers

## Prospective industry careers for chemical engineering

- Chemicals and applied products
- Education
- Energy
- Food and drink
- Fuels and energy production
- Global engineering and project management
- Materials and products
- Mining and minerals
- Oil and gas
- Pharmaceuticals
- Technology and consulting
- Water



Accredited by the Institute of Chemical Engineers (IChemE)

## **Programme summary**

Civil engineering is concerned with the techniques and procedures by which dams and reservoirs, water supply and sewage disposal systems, power stations, ports, offshore works, transport systems, bridges, tall buildings and other structures are planned, designed, built, surveyed, tested, operated, maintained and decommissioned.

This course has been accredited by the Joint Board of Moderators (JBM) including the Institution of Civil Engineers, the Institution of Structural Engineers, the Chartered Institution of Highways and Transportation, and the Institute of Highway Engineers. Accreditation is a mark of assurance that the degree meets international standards.



## Careers

BEng (Hons) Civil Engineering (2+2, 4+0)

### Prospective industry careers for civil engineering

- Construction
- Consultancy
- Education
- Energy
- Government
- Global engineering and project management
- Mining and minerals
- Water engineering

## **Typical modules**

- Hydraulics
- Construction Project Management
- Structural Analysis
- Geotechnics
- Civil and Structural Steel Design Project
- Fundamentals of Materials

Our Civil Engineering course equips graduates with core scientific and engineering knowledge, practical laboratory and team-working skills.





## **Dr Chengheng Pang**

Associate Professor in Chemical Engineering. Chemical and Environmental Engineering Course Director.

Success to a teacher is when students have simple solutions to complicated problems, more questions than answers, and they expect the unexpected.



## **Dr Craig Hancock**

**Accredited** 

by the Joint

**Moderators** 

**Board of** 

Associate Professor in Geodesy and Surveying Engineering. Head of Department of Civil Engineering.

The most wonderful things about teaching are watching that light-bulb go on when students just "get it", and seeing students put the knowledge they have gained through their university studies into practice in real situations.



For more detailed course content, visit nottingham.edu.cn/civil



## **BEng (Hons) Electrical and Electronic Engineering (2+2, 4+0)**

## Programme summary

**Electrical and Electronic Engineering** 

Electrical and electronic engineering encompasses an exciting range of topics from consumer products to sophisticated scientific industrial and healthcare technologies. Our degrees provide a thorough grounding in both the academic and practical aspects of electrical and electronic engineering. We have close links with a range of industries, such as telecommunication, VLSI chip design and electrical machine industries.

## **Typical modules**

- Computer Aided Engineering
- Electrical Energy Conditioning and Control
- Electronic Processing and Communications
- Practical Engineering Design Solutions and Project Development
- Control Systems Design
- Digital Communications

## University of Nottingham is placed first in the UK for **Electrical and Electronic**

Guardian University Guide 2018

### Careers

### Prospective industry careers for electrical/ electronic engineering

Electrical and Electronic engineers design, develop, test, and supervise the manufacturing of electrical equipment, such as:

- Electric machines and drives
- Radar and navigation systems
- Communications systems
- Power generation equipment
- Automobiles and aircraft
- Telecommunication industry
- Semiconductor, integrated circuit design, simulation, verification, implementation, testing and fabrication industry
- Computer hardware and software



Accredited by the Institution of **Engineering and Technology (IET)** 

## **Programme summary**

(2+2, 4+0)

The programme responds to the increasing demand for professional engineers who are equipped to provide engineering solutions to the historic and emerging human and natural impacts on the local and global environment. Environmental engineers may use their specialist expertise to tackle challenges in energy, water availability and the management of waste that we produce.

### This programme:

- introduces fundamental engineering sciences including heat and mass transfer and fluid mechanics
- equips students with professional skills needed to address the environmental issues
- is awarded the Provincial '13th Five Year Plan' **Distinction Course**



Accredited by the Institute of Materials, Minerals

and Mining (IoM3) ACCREDITED PROGRAMME

## **Typical modules**

- Introductory Geology
- Fluid Mechanics
- Environmental Assessment
- Waste Management
- Air Pollution
- Hydrology and Hydrogeology

## Careers

**BEng (Hons) Environmental Engineering** 

Prospective industry careers for environmental engineering

- Environmental protection
- Global engineering and project management
- Process engineer
- Technology and consulting
- Water treatment

The programme allows graduates to apply their knowledge and skills to the protection and enhancement of the environment.



**Professor Jim Greer** Li Dak Sum Chair Professor

in Advanced Electronic Materials and Devices. Head of Department of Electrical and Electronic Engineering.

66 Witnessing our students grow as they acquire knowledge is a privilege. Knowing that they will apply their skills to make the world a better place is reassuring. 99



Qian Xu

Graduated with the First Class BEng degree in 2014. Currently studying PhD at the University of Oxford with full scholarship.

66 Compared to other key universities in China, UNNC offers students a global vision and a British education. I want to thank all the professors who have selflessly offered me guidance and supervision. Without their help, I may not have been able to stand out against other candidates to get a full scholarship from Cambridge. 99



For more detailed course content, visit nottingham.edu.cn/cee

For more detailed course content, visit nottingham.edu.cn/eee

## **BEng (Hons) Mechanical Engineering (2+2, 4+0)**

## **Programme summary**

Mechanical engineering is the broadest of all the engineering disciplines and graduates find employment in every sector of industry. As a mechanical engineer, you may work in design, development, research, consultancy, manufacturing or marketing. On this degree programme you will learn various technical and managerial skills, how to apply scientific knowledge to solve problems, and how to design machines that help us to enjoy a better lifestyle. Course modules will provide you with an excellent foundation in engineering science and design so that you can later develop specialist knowledge in areas such as aerospace, automotive, manufacturing and energy engineering.





**Accredited by the Institution of Mechanical** Engineers (IMechE) and the Institution of **Engineering Designers (iED)** 

Mechanical engineering

is the broadest of all the



Prospective industry careers for mechanical

- Aerospace
- Automotive
- Construction
- Energy
- Manufacturing
- Medicine
- Materials and products
- Railways and sport
- Design engineer

## **Typical modules**

- Statics and Dynamics
- Materials and Manufacturing
- Thermodynamics and Fluid Mechanics
- Mechanics of Solids
- Computer Modelling Techniques
- Management Studies



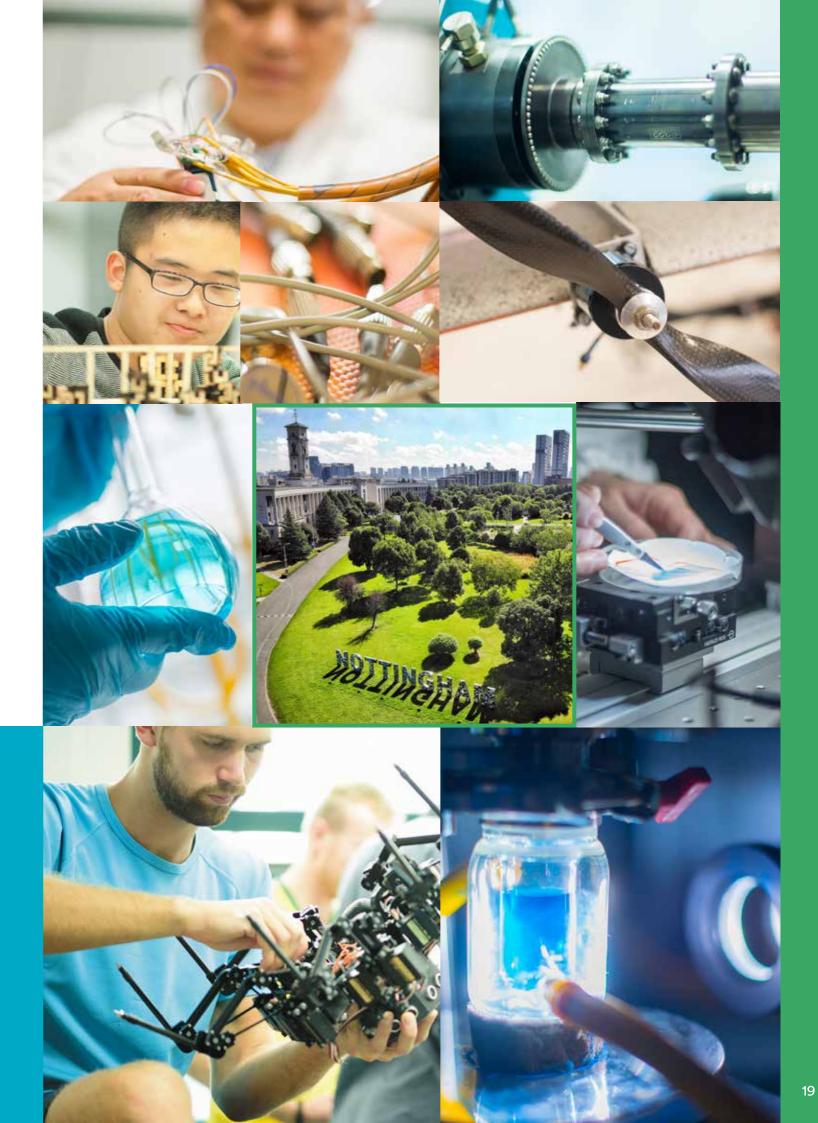
## **Zhuang Dong**

Dream Scholarship Award PhD candidate at UNNC

work hard and I play hard. UNNC gives me the chance to see different people and different culture. I am so much confident and brave now.99



For more detailed course content, visit nottingham.edu.cn/m3



## BEng (Hons) Product Design and Manufacture (2+2, 4+0)

## **Programme summary**

**Product Design and Manufacture** 

20

This course equips you for a career in product and industrial design, or in the product development sector. The course has been developed to address the specific needs of the industry to give its graduates the best possible chances of obtaining the jobs they want. The course values creativity whilst emphasising an understanding of manufacturing, ergonomics and materials.

## **Typical modules**

- Materials and Manufacturing
- Industrial Design and Professional Practice
- Physical Ergonomics
- Design Communication
- User Centred Research and Design



Accredited by the Institution of Engineering Designers (iED)

### Careers

Prospective industry careers for product design and manufacture

- New Product Design and Development
- Product Interface Design and Interaction
- Design Engineer
- Marketing Sales
- Logistic
- Supply Chain

## International awards that our students have won

- Red Dot Award: 2
- A' Design Award: 2 Gold, 3 Silver and 2 Bronze
- The IDA International Design Award: 18 Gold, 14 Silver and 16 Bronze
- European Product Design Award: 1 Gold, 1 Silver
- International Association of Lighting Designers: 2
- Industrial Designers Society of America: 1 Silver

The course values creativity whilst emphasising an understanding of manufacturing, ergonomics and materials.

## BEng (Hons) Aerospace Engineering (2+2, 4+0)

## Programme summary

The aerospace industry is huge and diverse, and employs engineers across multiple disciplines. The aerospace engineering degree prepares students for a career in the industry by providing knowledge on how aircraft are designed, constructed, powered, used, and controlled for safe operation. As an aerospace engineer, you could work in design and manufacture of civil and military aircraft. You could also work in technical departments of airlines.

## Typical modules

- Aerospace Aerodynamics
- Aerospace Design and Materials
- Aircraft Design and Performance
- Airframe and Materials
- More Electric Aircraft
- Avionic Systems

## Careers

## Prospective industry careers for aerospace engineering

Graduates are expected to explore their career in research, technology development, engineering design, testing, manufacturing, maintenance, and teaching related to aeronautics.

- New energy
- Aerospace/aviation
- Advanced manufacturing
- Instrumentation/industrial automation
- Computer software
- Electronics/semiconductors/integrated circuits

As an aerospace engineer, you could work in design and manufacture of civil and military aircraft.



Dr Xu Sun

Associate Professor in Product Design and Manufacture

66 I endeavour to communicate my philosophy of design to our students, which is about making people's lives richer and happier. I encourage every effort to provide students with the confidence to seek and create solutions to real problems from the people we serve. 99



## **Professor Michael Galea**

Faculty Director of Research and Knowledge Exchange

66 It is truly impressive and inspiring when you consider what our students are achieving and the positions they are being offered, following their experience at UNNC.



For more detailed course content, visit **nottingham.edu.cn/ae** 

## BSc (Hons) Chemistry (2+2)

## **Programme summary**

Chemistry

The BSc (Hons) in Chemistry program offered by the University of Nottingham Ningbo China (UNNC) is designed to exploit your curiosity for chemistry, to encourage you to express your ideas clearly and logically, and to develop your approach towards independent learning, so that you can adapt to a wide variety of careers.

Students pursuing the four-year BSc Chemistry degree spend the first two years of the degree studying at the University of Nottingham Ningbo China and the second two years studying at the University of Nottingham in the UK. In addition to attending lectures and small-group tutorials, you will gain laboratory experience in hands-on practical classes that introduce you to the current synthetic and analytical approaches in chemistry and the operation of modern instrumentation. In your third year, you will work on short-term, team-based projects to develop your time management skills. You will also be assigned a personal tutor who will guide your studies and help you to select modules that match your interests and ambitions.

As a Nottingham chemistry graduate you will be well prepared for a wide range of employment and postgraduate study opportunities. The chemical industry requires trained chemists, and the emerging materials and biotechnology sectors require chemists who can generate the new materials, products and knowledge that are needed in these areas.

### Careers

Recent destinations of graduates in chemistry from the University of Nottingham UK include:

- Boots
- Cancer Research
- GlaxoSmithKline
- HSBC
- Intellectual Property Office
- IntelleNHS
- Unilever

In addition, many graduates continue their studies in chemistry or a related discipline, working towards postgraduate degrees at the Masters level.

## Typical modules

- Foundation and Advanced Laboratory Work
- Organic Molecules, Synthesis and Spectroscopy
- Topics in Inorganic Chemistry
- Principals in Analytical Chemistry
- Medicinal Chemistry and Molecular Biology
- Contemporary Drug Discovery

## BSc (Hons) Computer Science with Artificial Intelligence (2+2, 4+0)

## Programme summary

This course is designed to offer both a general understanding of computer science as well as in-depth knowledge of artificial intelligence. In addition to fundamental classes and laboratories in computer science, the course covers topics including expert systems, intelligent agents, the history and philosophy of artificial intelligence, machine learning, computer vision, neural networks, heuristic optimisation and other intelligent systems. Graduates from this course will have the computer science savvy and skills along with additional AI expertise which will help you to pioneer AI developments in the future.

## **Typical modules**

- Programming and Algorithms
- Fundamentals of Artificial Intelligence
- Algorithms Correctness and Efficiency
- Artificial Intelligence Methods
- Systems and Architecture
- Machine Learning
- Computer Vision
- Computer Security

- Operating Systems and Concurrency
- Languages and Computation
- Programming Paradigms
- Systems and Architecture
- Mathematics for Computer Scientists

### Careers

Prospective industrial careers for computer scientists in artificial intelligence

- Data scientist
- Research scientist
- R&D engineer
- Business intelligence developer
- Computer vision engineer

Graduate with savvy computer science skills and added artificial intelligence expertise.





**Dr Dave Towey** 

Associate Professor in Computer Science 2017 Lord Dearing Award Winner

66 Students are major stakeholders in the teaching and learning experience, and their opinion and feedback must guide teaching practice.



For more detailed course content, visit **nottingham.edu.cn/cs** 

## BSc (Hons) Computer Science (2+2, 4+0)

## **Programme summary**

Computer Science

This course is designed to produce high quality graduates with a sound technical knowledge of the aspects of computer science.

You will gain an appreciation of current computing practice and skills that you can apply immediately after graduation.

You will graduate with a knowledge of the fundamentals of computer science, including an appreciation of the interaction between hardware and software; an understanding of human computer interaction and the sociological impact of information technology. You will also gain knowledge of the professional standards and ethics of the computer industry, together with the skills and confidence to react to its ever-increasing rate of change.

This degree programme will prepare you for the growing demands of employers in various sectors as well as the opportunity to pursue postgraduate studies in computer science.



Accredited by British Computer Scoiety

## **Typical modules**

- Programming and Algorithms
- Programming Paradigms
- Operating Systems and Concurrency
- Mathematics for Computer Scientists
- Software Engineering
- Languages and Computation
- Human Computer Interaction
- Computer Security
- Parallel Computing
- Mobile Device Programming

## **Careers**

Prospective industrial careers for computer scientists

- Software developer
- Database administrator
- Computer systems analyst
- Information security analysts
- Computer programmer

## **Programme summary**

The BSc Environmental Sciences programme at UNNC aims to prepare its graduates for exciting careers addressing some of society's major environmental challenges. The programme is ideal for students who have broad interests in nature and the environment and who are keen to investigate how we can best manage human activities to protect these systems.

Our students are supported by a highly dedicated and award-winning teaching team. They will gain knowledge of the environment (physical geography and ecology) and management (particularly, natural resources), and develop technical skills which are sought after in a range of different industries (statistics, Geographical Information Systems [GIS], modelling and informatics and scientific communication). This training is achieved through classroom teaching and small group tutorials, and through extensive practical work in the field and laboratory to develop their personal confidence and independence as scientists.

Around 90% of our graduates move onto postgraduate training in the UK, USA, Hong Kong and Australia, with more than half accepted into global top 10 universities. Our superb graduates are highly sought after in the job market too, and there is an increasing demand for their particular skill and knowledge set in China.

## Careers

BSc (Hons) Environmental Sciences (2+2)

Prospective industrial careers for environmental sciences

- Environmental consulting
- Waste and pollution technology
- Water engineering
- Bioenergy technology
- Environmental monitoring and assessment
- Geographical information systems (GIS)
- Environmental NGOs
- Finance and accounting
- Software engineering
- Port logistics
- Retail
- Education

## **Typical modules**

- Interpreting Environmental Data
- Environmental Science and Society
- Principles of Ecology
- Soil Science
- Digital Earth
- Environmental Modeling
- Geographic Information Science, Statistical Analysis





## Lei Yu

The BP Achievement Award MSc in University of Cambridge PhD in University of Oxford Research Scientist, DeepMind

66 I have the opportunity to learn the cut-edge theories and technologies at the UNNC.
Overseas study experience broaden my horizon. The self-learning skills I learnt plays a vital role in my current work.



## **Dr Odette Paramor**

Head of School of Geographical Sciences Associate Professor of Marine Biology Faculty Teaching Excellence Award, 2017

66 I feel extraordinarily privileged to teach such great students. Our graduates make a real impact in China and on the world. 99



For more detailed course content, visit nottingham.edu.cn/geos

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Mathematics with Applied Mathematics

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## BSc (Hons) Mathematics with Applied Mathematics (2+2, 4+0)

## **Programme summary**

The BSc Mathematics with Applied Mathematics offers a mathematical education with an emphasis on the real-life applications. The students will be introduced to mathematics as a key tool in solving problems in natural sciences, engineering and economy. They will also be introduced to abstract mathematical ideas, and they will learn that these ideas are an important source of innovation in many applications.

This programme will equip students with the tools they will need to be competitive in the job market as well as in further study. This is done through offering a diverse selection of optional modules to fit students' interests. These include modules in finance, economics, computer science, and engineering. The course provides a very broad spectrum of career paths in academia and industry to successful graduates.

This programme offers mathematical education with an emphasis on the real-life applications.

## Typical modules

- Vector Calculus
- Applied Mathematics
- Stochastic Models
- Complex Functions
- Mathematical Finance
- Differential Equations and Fourier Analysis
- Calculus
- Linear Mathematics
- Stochastic Models

## Careers

Our curriculum is designed to help students develop sound mathematical skills for further study and promising careers. We inspire students to apply for jobs in world-leading companies such as investment firms, banks, and other Fortune 500 companies like Google or Alibaba. We also provide students with opportunities to continue their education in various interdisciplinary courses by offering a wide variety of optional modules.

## **Programme summary**

The BSc Statistics offers a broad mathematical education with an emphasis on using statistical and computational ideas in a number of practical applications, applications. It also enables the students to study statistics across a range of disciplines without having to specialise.

BSc (Hons) Statistics (2+2)

Students will acquire a basic knowledge of mathematical methods, applied mathematics, probability and statistics, together with modelling skills applicable to the physical and biological sciences, business, economics and finance. Successful completion of the programme will help students to appreciate how important statistical modelling is, and how it provides a theoretical foundation for certain application areas. It will also prepare students for employment opportunities in business, economics, finance, education and government sectors.

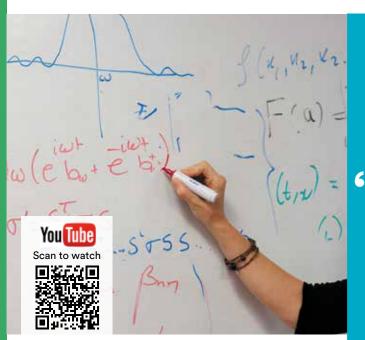
Our curriculum is designed to help students develop sound statistical skills for further study and promising careers.

## **Typical modules**

- Applied Mathematics
- Statistics
- Analytical and Computational Foundations
- Probability
- Coding and Cryptography
- Statistical Inference
- Mathematical Finance
- Calculus

### Careers

Our curriculum is designed to help students develop sound statistical skills for further study and promising careers. We inspire students to apply for jobs in world-leading companies such as investment firms, banks, and consultancy companies, especially in emerging markets. We also provide students with opportunities to continue their education in various interdisciplinary courses by offering a wide variety of optional modules.





## **Dr Richard Rankin**

Assistant Professor in Applied Mathematics

I want the students that I teach to gain mathematical knowledge and abilities that will enable them to do well in their careers.



You Tube

Scan to watch



## **MSc Geospatial Engineering with Building Information** Modelling (BIM)

## Programme summary

This programme will be run entirely at the University of Nottingham Ningbo China (UNNC) with internship opportunities in leading BIM companies in China. It is a collaboration between the Department of Architecture and Built Environment and Civil Engineering. The course has been accredited by the Chartered Institution of Civil Engineering Surveyors (ICES). The accreditation of the Royal Institution of Chartered Surveyors (RICS) is on pending.

Research and teaching support will be provided by the leading research laboratory the Geospatial BIM lab. We are working closely with leading AEC consultants (Arup, WSP BP), international professional institutions (RICS, ICES, CIBSE) and leading BIM software vendors (Autodesk, Bentley, Leica, Tekla, Trimble).

## Core modules

- Introduction to Building Information Modelling and Management
- Fundamentals of Satellite Positioning
- Geodetic Reference Systems
- Engineering Surveying
- Global Smart City with Integrated BIM
- Research Project Organization and Planning
- Photogrammetry and Remote Measurement Techniques
- BIM and Project Cost and Time Management
- BIM+ and its Future
- Geospatial Engineering and BIM Research Project



Accredited by the **Chartered Institution of Civil Engineering Surveyors** 

## **Postgraduate Research Programmes**

## **Master of Research** Programme (MRes)

The MRes degrees aim to impart advanced knowledge in the specialist areas of science and engineering as well as generic transferable skills in research methods and project management. This allows candidates to engage in innovative research and development. Compared to MSc taught programmes, MRes emphasises the research and targets the students wishing to progress to a PhD degree programme to pursue an academic or industrial career.

- MRes Sustainable Energy and Building **Technologies**
- MRes Chemical Engineering and Technology
- MRes Environmental Science and Engineering
- MRes Material Science and Engineering
- Electronic
- MRes Mechanical Engineering

## **Doctor of Philosophy** Programme (PhD)

- Built Environment
- Project Management
- Chemical Engineering
- Environmental Engineering
- Civil Engineering
- Computer Science and Operations Research
- Computational Intelligence in Transport
- Electrical and Engineering
- Renewable Energy **Technologies**

- Geographic Science
- Applied Mathematics
- Manufacturing Engineering
- Mechanical Engineering
- Sustainable Manufacturing
- IAMET New Materials and New Equipment
- Sustainable Energy **Technologies**
- Sustainable Building Technology
- Aerospace Engineering



Polina Trofimova

Currently a PhD student in Built Environment

**66** All my work was paid off by the feeling of satisfaction every time I made an assignment submission, because it meant that I learnt something new and succeeded in applying new knowledge into practice. Now I am doing my PhD study in the D-CiTi Lab with the most talented team. Together we are pushing the boundaries of digital and sustainable city concept. 99



For more detailed course content, visit nottingham.edu.cn/

Postgraduate by Taught Programmes

# Exchange and study abroad opportunities

## Study abroad

The University of Nottingham is a truly international institution and has three campuses around the world – the UK, China and Malaysia.

At the University of Nottingham Ningbo China (UNNC), students have many opportunities to study at our other campuses or at one of our partner institutions overseas. 2+2 programmes offer the option for students to spend the last two years of their course at our campus in the UK.

Undergraduate students are offered the possibility of spending part of their degree studying or working in a number of European countries through the Erasmus programme.

## **Student exchange programmes**

We offer a number of exchange opportunities for 4+0 programme students. You can apply to spend one semester or both semesters of your third year at either our UK or Malaysia Campuses or at a arange of approved study abroad partners around the world.

## Overseas summer school

There are many overseas summer school opportunities for you to experience another culture, including summer schools at our Malaysia and UK campuses.



## Our partner universities

- University of Melbourne
- University of Queensland
- University of Technology Sydney (UTS)
- University of Sydney
- University of New South Wales (UNSW)
- Concordia University
- Universidad del Desarroll (UDD)
- University of Applied Sciences Bremen
- City University of Hong Kong
- University College, Dublin (UCD)
- Korea University
- University of Nottingham Malaysia:
- University of Amsterdam
- University of Auckland
- Norwegian University of Science and Technology(NTNU)
- Zurich University of Applied Sciences:
- The College of Charleston :
- The University of South Florida
- University of Connecticut (U21)
- The University of Tennessee
- University of Nottingham
- University of Glasgow (U-21):
- University of Birmingham (U-21)
- Bucknell University
- Institut D'etudes Politiques De Toulouse
- Tecnologico de Monterrey(ITESM)
- University of Canterbury

- McGill University
- Universita commerciale Luigi Bocconi
- Technical University of Denmark
- Butler University
- Aarhus University
- Sungkyunkwan University(SKKU)
- The University of Groningen
- Kuhne Logistics University (KLU)
- University of Copenhagen
- Radboud University Nijmegen
- Trinity College Dublin
- Monash University
- Universidad Carlos III de Madrid
- Ewha Womans University
- The American University in Cairo
- Vasalius College
- College of Engineering, Texas A&M University
- Hangyang University
- National Tsing Hua University
- Lulea University of Technology Sweden
- Jacobs University
- Universidad de Deusto
- The University of Texas at Dallas
- Macaw University
- Tunghai University
- Yuan Ze University
- Chulalongkorn University
- University of Parma

- National Taiwan University
- Universidad de la Sabana
- Universidad de Cantabria
- University of NavarraUniversity of Essex
- Offiversity of Essex
- Czech Technical University in Prague
- Chitkara University
- Technische Hochschule Nurnberg Georg Simon Ohm
- Ming Chuan University
- National Taiwan University of Science and Technology
- Kyung Hee University
- The University of Warwick
- University of International Business and Economics
- Poznan University of Economics and Business
- Cracow University of Economics
- Warsaw School of Economics, Poland
- Department of Engineering, University of Modena and Reggio Emilia, Italy
- Chiang Mai University
- University Sains Malaysia
- Nazarbayev University
- Universidad Rey Juan Carlos
- Sehir University
- Universidad Catolica San Antonio de Murcia (UCAM)
- Universidad de Castilla La Mancha (UCLM)

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## On campus

## **High Street**

A vibrant UK-style high street is a popular gathering point on campus. Facilities include a bank, post office, dry cleaner, supermarket, grocery store selling imported goods, hair salon, travel agency and several restaurants, including one selling Halal and Arabic options. Shopping centres, entertainment facilities and other amenities are all within walking distance or a short bus or taxi ride from the campus.

All student language first year.

The Interval of the interval

## 24-hour access to medical care

The campus has a dedicated clinic with doctors and nurses on 24-hour call and a new private hospital nearby which is equipped with an emergency department. An English-speaking medical adviser is available to accompany students to hospitals and clinics.

## Free Chinese language lessons

All students are offered two hours of free Chinese language lessons per week for the duration of their first year.

## The International Office

Staff in the International Office are committed to offering guidance and support to international students from the moment they register. We can offer you expert advice on matters such as visa and immigration regulations.

## **English language support**

If English is not your first language, you may want to take advantage of our Academic Literacy Development Centre. Qualified staff of this centre will help you to polish your English. For those who need it, our degree programmes include a preliminary year during which the focus is on improving English for academic purposes.

## How to apply

1

Your application should normally include:

- A completed online application form
- One reference
- A copy of your official high school diploma/university degree
- Official academic transcripts
- A valid English language test score, if applicable
- A photocopy of your passport
- A passport size colour photograph
- A copy of personal statement

2

To submit your application, please visit: nottingham.edu.cn/en/study/

Completed applications should be emailed to international\_admissions@ nottingham.edu.cn

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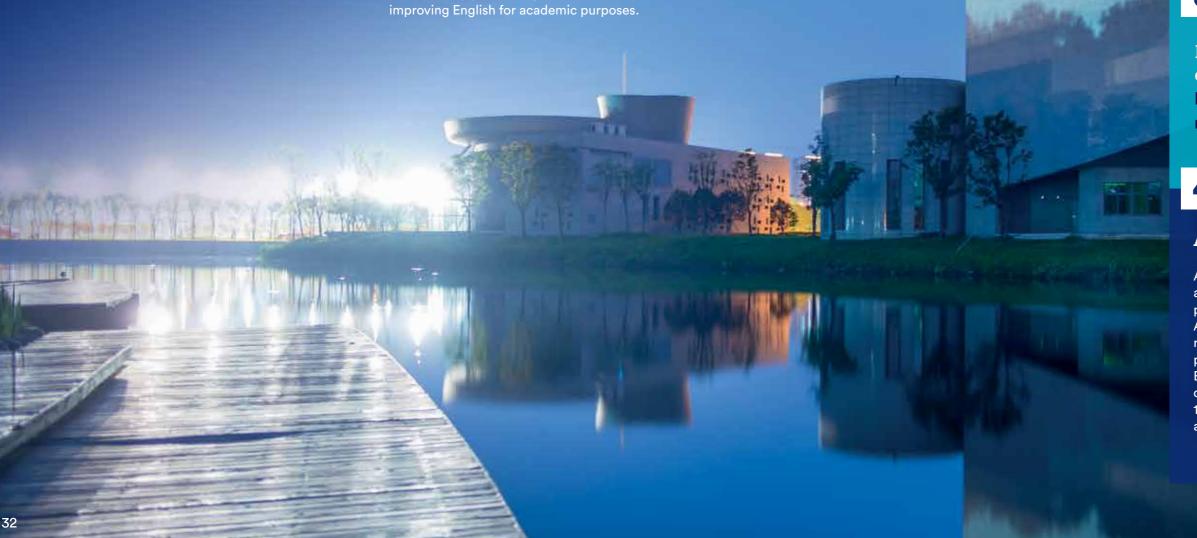
For MRes and PhD programmes, email:

PhDAdmissions@
nottingham.edu.cn

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## Application deadline

Applying early is strongly encouraged as the closing date for applications with priority scholarship consideration is 30 May. Applications are accepted after this time on a rolling basis and considered for scholarship as part of second round consideration. Official English language test results and/or degree/diploma certificates should be submitted by 15 July, however, if your results are released after this date please get in touch with us.



# Explore and experience a foreign culture the China Experience

## **Professional marketability**

An experience abroad is one of the most important assets a fresh graduate can have. Most companies will favor applicants who have had international exposure during their studies. In our increasingly globalized world, it is essential to think about the world as a whole, and to experience its different cultures.

Moreover, learning Mandarin also proves to be a rather interesting skill on a resume. As China keeps developing, Mandarin will become a very important language. Chinese companies and people already invest a lot in our markets, and the Chinese market is a top destination for our goods. No matter how much you will be able to use it in your professional life, learning Mandarin shows dedication and perseverance toward an objective. It also shows your ability to confront yourself with the unknown, and to learn from it.

## Challenge yourself and grow

Going to study abroad in a foreign country is not necessarily always a smooth experience. Not everything will function the way you're used to, communication can sometimes be hard and you might feel pretty overwhelmed at times.

It's normal to sometimes feel frustrated, overwhelmed and lost when you live abroad in a new country. The reason someone would willingly opt for these experiences is that it forces you to get out of your comfort zone. Only when you're willing to step into the unknown and unfamiliar can you learn more about yourself, widen your perspective and expand your sense of your own capabilities.

## **Affordable**

Studying and living in China is cheaper than studying and living in European countries, the U.S., Japan, South Korea and many other countries.

## Discover | #FoSE

## **Learn Mandarin**

Knowledge of Mandarin, one of the world's mostspoken languages, could open plenty of doors in your future career. Whether you intend to work in China, join an international company maintaining Chinese partnerships and market knowledge, or work in non-profit organisations or on university campuses, being able to speak Mandarin will make make you more employable.

You don't need to speak the language before studying in China; you can learn it once you arrive. Concordia University Irvine's MAIS program, for instance, is taught entirely in English, but offers opportunities to learn Mandarin as part of the course.



Abdulhalim Saeed Alfadel Saeed Riyadh, Saudi Arabia BEng (Hons) Civil Engineering

It's very convenient living in China, everything is at your fingertips right on your phone's screen through apps such as Alipay and Wechat. It's a different culture, you might feel that you don't belong at first but in time your feelings will change. The locals are friendly, respectful, and helpful; sometimes it might seem that they don't want to help but in reality they're afraid of offending you or are shy.



Adam AL-AZZAWI
Sweden
BSc (Hons) Environmental Sciences

I was afraid that I might not be able to understand the culture, but it turned out that UNNC does its best to integrate students with the Chinese culture so that we learn. It did not take me that long to adapt as your colleagues are always very friendly and helpful, so do not hesitate from asking them about things if you need help.



