Faculty of Engineering & Design

BEng (Hons)
Mechanical Engineering degree
**BEng (Hons) Mechanical Engineering degree**  
**H.I.T and the University of Bath, UK**

**Introduction**

This elite 2 + 2 programme offers H.I.T.’s high achieving students the opportunity to obtain the BEng (Hons) Mechanical Engineering degree from the University of Bath, UK. After two years in Harbin, students spend two years in our number 1 ranking department in one of the best universities, and one of the safest and historically famous cities in the UK.

英国巴斯大学和哈尔滨工业大学的2+2联合培养计划为哈工大机械工程专业优秀本科生提供了一个同时获得哈工大机械工程专业学士学位和英国巴斯大学机械工程专业学士学位（荣誉）的机会。学生在哈工大完成前2年的学习后，在英国巴斯大学完成后2年的学习。巴斯大学是英国最著名的大学之一，其机械系在英国排在第一名。巴斯城是英国最安全的历史名城之一。

“Harbin Institute of Technology is well known to my faculty. We have welcomed many MSc and PhD students to study with us as well as distinguished faculty to work on research projects. I myself have visited H.I.T. on a number of occasions to develop close working links and to share and build friendship. I am always impressed with the passionate approach of its outstanding students to engage with their studies and to learn from their teachers.

In 2010 we developed this programme for Mechanical Engineering students at H.I.T. to move to the University of Bath after year two of their study in China and complete a further two years at Bath. The students will therefore earn two degrees from two world leading universities. We are delighted to welcome the class of 2012 from H.I.T. to the University of Bath.

I hope to welcome you to the University of Bath one day and to share the special friendship that we have with H.I.T.”

**Professor Gary Hawley**  
Dean of the Faculty of Engineering and Design

“As the admissions tutor for our programme with H.I.T. I am delighted to welcome the new group of students to the University of Bath. I wish them every success on the Mechanical Engineering degree and hope they settle in comfortably and enjoy their life in Bath as much as the last year's group have. I am sure they will make H.I.T proud and become great ambassadors for both our universities. I look forward to working closely with the staff and students at H.I.T over the coming years to deepen this mutually beneficial partnership.”

**Dr Sally Clift**  
Senior Lecturer, Department of Mechanical Engineering
Mechanical Engineering at Bath, currently number one in the UK, (Sunday Times University Guide 2013), consistently ranks very high in league tables due to a high staff to student ratio, high employability rates and the strength of its research reputation. Our students are highly sought after by industry with 90% of graduates regularly achieving related jobs within 6 months with salaries well above the national average. Others continue directly onto a PhD.

巴斯大学机械工程专业目前在英国排在第一名（星期日泰晤士报2013年大学排名）。巴斯大学机械系由于高师生比，高就业率和高水平的科研而在各类大学排名表中均排在非常高的位置。我们的毕业生十分抢手，大约90%的学生都能在毕业 后 6个月内找到本专业的工作并且其薪水远远高于全国平均水平。剩余的学生都直接攻读博士学位。

www.bath.ac.uk/mech-eng

The University of Bath

Bath is one of the most successful universities in the UK, famed for its excellent academic reputation, internationally leading research and exceptional graduate employment record. We specialise in engineering, the sciences and management and attract students from over 100 countries to create a truly cosmopolitan campus.

巴斯大学以其卓越的学术声誉，国际领先的科研水平和卓越的毕业生就业记录而成为英国最成功的大学之一。我们于工程，科学和管理领域具有非常高的水平并吸引来自100多个国家的学生从而创造一个真正的国际化校园。

www.bath.ac.uk

The City of Bath

The most popular tourist city outside London, and just 90 minutes from the capital by train, is the only city in the UK to be included in UNESCO’s world heritage list. This is due to the natural hot springs made famous in Roman times from which the city takes its name.

巴斯是伦敦以外最热门的旅游城市。距伦敦仅90分钟火车车程。巴斯因其闻名于古罗马时代天然温泉而得名，并成为英国唯一被列入联合国教科文组织的世界遗产名录的城市。巴斯城由此而得名。

www.bath.ac.uk/study/ug/city

The Department continues to uphold its strong belief in high quality academic achievements. This, coupled with a modern understanding and teaching of the life/work skills required by modern engineers, makes their courses produce graduates that stand out.”

Adrian Landa
Rotork Manufacturers
Programme details

Undergraduates from H.I.T., who have successfully completed the first two years of the Elite Scholar or standard undergraduate programme, will be considered for entry to the second year of the BEng (Hons) Mechanical Engineering programme at Bath.

课程详情

机械工程专业的本科生在哈工大完成前2年的学习后将被考虑进入英国巴斯大学完成后2年的学习，达到毕业合格要求后，将同时获得哈工大机械设计制造及自动化专业学士学位和英国巴斯大学机械工程专业学士学位。

"The Mechanical Engineering course provides a breadth of technical knowledge needed for our graduate engineering leadership and professional excellence training programmes."

-Mike Zdybel
Rolls Royce

Teaching

Teaching is delivered through a variety of methods including large formal lectures, smaller tutorial classes and practical design-and-build activities.

教学方式：包括正规的讲座，小型辅导班和具体的课题设计及建造活动等等。

Entry requirements

The academic entry requirement is an 80% average mark in years 1 and 2 of the HIT Bachelors in Mechanical Engineering.

在哈工大机械工程专业第一，二年的考试成绩平均达到80分。进入巴斯大学的英语语言要求是雅思达到6.5分且其中任何一项测试均不低于6.0分（阅读，写作，听力，口语）或其他同等英语成绩。其他等效英语成绩的详细信息参见以下网站：

www.bath.ac.uk/study/ug/apply/englishlanguage

Courses

Semester 1 (September to January) Semester 2 (February to June)

Year 1

University of Bath

Systems and control
Modelling techniques 1
Thermofluids 1
Solid mechanics 3
Design 3

Modelling techniques 2
Thermofluids 2
Solid mechanics 4
Design 4
Modern manufacturing – integrated design, make and serve

Year 2

University of Bath

Control systems
Structural mechanics
Thermofluid systems
Mechanical vibrations and noise
Materials selection in engineering design

Group business and design project
BEng individual engineering project

The individual engineering research project

The individual engineering research project in the final year is an opportunity to work one-to-one with a member of academic staff and use the faculty’s research facilities. Examples of individual research projects are:

- Robot motion planning and control
- Environmental impact of providing heat and power to rural areas
- Solar powered cooker
- Bio-energy production
- Scuba divers balancing device

H.I.T. students who have successfully completed the BEng (Hons) award will also be considered for admittance to our one year Masters programme, in exceptional cases onto a sponsored PhD.

The Group Business Design Project

The group business and design project involves students working as a team to design an engineering product. Projects cover technical and business aspects of engineering and are regularly supervised by industrialists as well as key academics in the department. Typical projects include the Formula student racing (Team Bath Racing), autonomous underwater vehicle design and the human powered aircraft.

分组课题设计及业务推广项目：多名学生合作设计某一工业产品。项目涵盖技术和业务推广两方面的内容并接受来自工业界的技术人员和大学老师的联合指导。代表性的项目包括学生方程式赛车Team Bath Racing，水下自动机器人的设计和人力飞行器等。
Student experience

**H.I.T. Students**

H.I.T. students who have joined the 2+2 programme at the University of Bath will be available to support the newcomers and share their experiences in years to come.

在不久的将来已经参加英国巴斯大学的2+2项目的哈工大学生将能同新人分享他们的经验。

“I firmly believe that coming to University of Bath is the best choice I have ever made in my life. To me, the environment here is marvellous, the city is quiet and graceful, the 24-7 library is convenient. It is absolutely a enjoyable place for living and learning.

However, you must understand this is a different world from what we are used to, and you will need to get used to different ways of thinking and customs, and you may feel a little lonely from time to time. But other Harbin students are here to support you and will always have your back. So, if you are brave enough for the challenge and eager to have a new life experience, then come and join us. ”

**Cong Gao**

**Alumnus of H.I.T.**

Alumnus of H.I.T. Dr Zhijin Wang, now lecturer in Mechanical Engineering at the University of Bath, is a support contact on campus for incoming H.I.T. students.

I obtained by BSc and MSc degrees in Power Engineering from the Department of Power Engineering at H.I.T in 1992 and 1995 respectively. I worked for three years as a lecturer in the same Department, now known as the School of Energy Science and Technology at H.I.T.

I have been at the University of Bath since 2005. You will enjoy Bath, the City is beautiful and you are joining an elite academic department. I work alongside Dr Sally Clift to help welcome new students from H.I.T. to the University here in Bath.”

**Dr Zhijin Wang**

**“The programme provides an opportunity for students in Harbin to experience an advanced teaching system and save time thanks to the recognized credits. One of the greatest advantages is enjoying the strengths of H.I.T. and Bath. The skilled fundamental knowledge such as mathematics and physics in H.I.T. and the innovative and critical analysis you learn in Bath.**

There have been several visitors from H.I.T. in Bath as well as teachers like Zhijin Wang who graduated from H.I.T, giving us a hand when we confront obstacles in both study and daily life, even finding a dentist. Teachers in Bath are kind, they answer your questions even outside their working time. I am now gifted with friendship in both countries.

The city is safe, clean and peaceful while the Uni is always crowded and energetic. The street performers are fascinating whilst students can light up the library twenty four hours a day.”

Shengxin Jia
Support network

We aim to ensure that H.I.T. students considering a move to Bath receive comprehensive support from initial enquiry through to their graduation as well as feeling safe and secure during their stay here. We can offer:

- dedicated academic and expert H.I.T. contacts in both China and the UK
- UK student ambassadors on campus who have visited H.I.T.
- H.I.T. students in year 3 to advise arriving year 2 students
- an international office support team providing support and advice
- a self contained campus with 24 hour security
- guaranteed university accommodation for 1st year
- comfortable living in one of the safest cities in the UK

This list is not exhaustive. Our website provides the most up to date information on all aspects of student life and support at Bath from preparing arrival to enjoying campus and city life.

Cost of living for one academic year is approximately £10,000 / 99,400 CNY (will vary).

Living in Bath

Guaranteed accommodation

Guaranteed accommodation is offered for students’ first year on our purpose built campus, situated in an area of 'outstanding natural beauty', just one mile from the vibrant historical city centre. State of the art amenities including an Olympic style sports training village and 24 hour security ensure students have a fun and safe experience.

巴斯大学将确保为哈工大学生提供第一年在校园内的学生宿舍。巴斯大学特别设计, 兴建的校园坐落在距离市中心仅一英里的环境优美的自然风景区内。其先进的设施包括一个奥林匹克训练标准体育村和24小时保安等从而确保学生有一个丰富多彩且安全的生活学习经历。

www.bath.ac.uk/study/ug/accommodation

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每学年的住宿费约为10,000英镑（约99,400元人民币）

www.bath.ac.uk/study/ug/studentlife
How to apply - key contacts

Harbin Institute of Technology

Professor SongJing Li, Deputy Dean in H.I.T., is your first point of contact for further advice on how to apply for this programme.

哈工大李松晶教授可以对如何申请2+2等提供进一步的信息和建议。

Prof. Dr. Songjing Li
Deputy Dean for Teaching
Department of Fluid Control and Automation

Email: lisongjing@H.I.T.edu.cn
Tel: 86-451-86418318

Address:
Harbin Institute of Technology
Box 3040, Science Park
No 2 Yikuang street Nangang district
Harbin, China, 150001

University of Bath

Dr Sally Clift, Senior Lecturer in the Department of Mechanical Engineering, is the admissions tutor for H.I.T. students interested in coming to Bath and works alongside Dr Zhijin Wang to welcome our new arrivals. She is available for any queries about study in Bath.

英国巴斯大学机械工程系高级讲师Sally Clift博士作为有兴趣来巴斯学习的哈工大学生的招生主任将和王志金博士一起欢迎新同学的到来。Sally Clift博士将为你解答关于在巴斯学习的任何疑问。她的联系方式为。

Dr Sally Clift
Senior Lecturer, Department of Mechanical Engineering

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Useful links

China pages
Specific information for Chinese students preparing to come to the University of Bath including the Chinese society
www.bath.ac.uk/study/international/country/china

Living costs
Up to date detailed information on likely living costs for an undergraduate student
www.bath.ac.uk/study/ug/funding/living-costs

Accommodation
Details of all halls accommodation available and costs involved including a virtual tour
www.bath.ac.uk/study/ug/accommodation

Campus lifestyle
Information on campus facilities from the library, social spaces and shops to the wide range of student societies and Olympic style sports facilities
www.bath.ac.uk/study/ug/studentlife

General support
Range of specialised service links including student health services and international visa advice service
www.bath.ac.uk/study/ug/support