

# **Admission Book 2016**

Office of International Students Beijing Institute of Technology



2016-2017









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ZHENG Hailan

# **BEIJING INSTITUTE OF TECHNOLOGY BIT History**

1949

Moved to Beijing

1952 Beijing Institute of Technology (BIT)

959 16 national kev universities to offer graduate degrees

995 1988 to "University"

# 2000

Project 095

# 1940

The First Engineering School, Founded in Yan'an as Academy of Natural Sciences

1940: The First Engineering School, Founded in Yan'an as Academy of Natural Sciences.

- 1949: Moved to Beijing.
- 1952: Beijing Institute of Technology (BIT).
- 1959: In the first group of 16 national key universities to offer graduate degrees.
- 1988: Changed its Chinese name from "Institute" to "University".
- 1995: Admitted to one of the 15 top-tier "Project 211" universities (State Educational Project).
- 2000: Admitted to be the 10th university in "Project 985" (State Educational Project).





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# WELCOME MESSAGE FROM THE DIRECTOR

Dear students and colleagues,

Thank you for your interests in Beijing Institute of Technology. As one of the top science and technology universities in the nation, we offer a high-level education for degree and language study.

With top-tier faculty and programs, friendly staff, and a pleasant living environment, I know that you will not be disappointed in choosing BIT as your university of choice. With many strong and prestigious science and technology programs to choose from, you will receive quality education and have great future job prospects.

Since BIT is located in the capital of China, you will be in the heart of the nation, surrounded by a city that has integrated modern conveniences together with the rich treasures of a culture with more than 5,000 years of history. Your choice of BIT will be rewarded with a wonderful university experience. We look forward to welcoming you here in Beijing!

Sincerely,

Wang Ving (Ms.) Director Office of International Students

# Students& Faculty Numbers

Students	27,563
Undergraduates	14,774
Masters	7,959
Ph.D Candidates	3,250
International Students	1,580
Employees	3,526
Faculty	2,058
Staff	1,468
	<u> </u>



01

# Top Ranking Programs in China

Aeronautics & Space Science and Technology	Control Science and Engineering
Mechanics	Computer Science and Technology
Mechanical Engineering	Instrument Science and Technology
Information and Communication Engineering	Chemical Engineering and Technology
Electronics Science and technology	Management Science and Engineering

# Undergraduate Programs

(Chinese & English\*)

Flight Vehicle Design and Engineering \* Mechanics Mechanical-Electronic Engineering \* Mechanical Engineering \* Industrial Engineering Vehicle Engineering **Optical Engineering** Measurement & Control Technology and Instrument Information and Electronics Engineering Electronic Science and Technology \* **Communication Engineering** Information Countermeasure Technology Automation Electrical Engineering \* Computer Science and Technology \* Internet of Things Engineering Software Engineering Materials Science and Engineering Chemical Engineering and Technology Biotechnology

Bioengineering **Biomedical Engineering** Mathematics Statistics Physics Chemistry Information Management and Information System **Business Administration** Marketing Accounting **Economics** International Economic and Trade Social Work law English Japanese German Spanish Industrial Design Art Design

# Undergraduate Programs in English

### Electrical Engineering

Main Courses: Fundamental of electric circuits, Electronics, Computer programming language, Principles of microcomputer and interface, Electrical engineering technique, Electrical measurement technology, Power electronics, Electrical machinery and drives, Fundamentals of control theory, Control system of electrical machinery, Motion control system, Energy and power conversion technique, Intelligent building, Factory electricity supply, Electrical engineering network and communication technology.

### Electronic Science and Technology

Main Courses: Fundamentals of circuits analysis, Fundamentals of analog circuits, Signals and systems, Fundamentals of control theory, Digital signal process, Random signal analysis, Electromagnetic field theory, information theory, Computer theory and application, Communication circuits and system, Digital communication theory, Theoretical physics, Semiconductor physics, Hardware description language, Microelectronic process, Microelectronic device, Analog integrated circuits analysis and design, Digital integrated circuits analysis and design, Integrated circuits CAD, MEMS.

# Computer Science and Technology

Main Courses: Discrete mathematics, Data structures and algorithms, Object-oriented programming computation theory and algorithms, Numerical analysis, Database principles and design, Principles of computer organization, Assembly language programming, Operating systems, Compiler principles and design, Fundamentals of software engineering, Computer architecture, Practice of operating system principles, Computer networks, Interface technique of microcomputer, Software engineering comprehensive practice, Practice of networking technology.

### Flight Vehicle Design and Engineering

Main Courses: Engineering mechanics, Fundamental of machine design, Automatic control theory, Electrical and electronic technology, The principle and application of the microcomputer, Aerodynamics, Flight dynamics, Structural mechanics, Introduction to flight vehicle systems, Flight vehicle system analysis and design, Principles of optimization design, Reliability engineering, An introduction to computational fluid dynamics, Flight vehicle guidance and control and Structure analysis and design of flight vehicle.

# Mechanical Engineering

Main Courses: Computer courses, Engineering mechanics, Fundamentals of mechanical design course in group, Fundamentals of engineering materials, Electrical and electronic technology, Testing technology, Microcomputer principle and interface technology, CNC technology, Fluid mechanics, Control engineering, Mechanical manufacturing engineering, CAD/CAM principle, Mechanical manufacturing equipment design, etc.

# Mechanical-electronic Engineering

Main Courses: Theoretical mechanics, Material mechanics, Fundamentals of machine design, Fundamentals of electric circuits, Fundamentals of analog electronics, Fundamentals of digital electronics. Introduction to mechanical electronic engineering, Principle & interface technology of microcontroller, Signal and system, Mechatronic control techniques, Mechatronic system analysis & design, Sensoring and testing technology, Mechatronic system modeling and simulation, Progress on the discipline, Fundamental of robotics, Introduction to bionic machine. Mechatronic servo system, Digital signal processing, Computer control technology, Error theory and data processing, ASIC design and test technology, Basic of microelectromechanical systems technology, and so on.

# Master Programs

(Chinese & English \*)

Aeronautics & Space Science and Technology\* Safety Science and Engineering Mechanical Engineering\* Dynamic Mechanical and Engineering Optical Engineering Instrument Science and Technology Electronic Science and Technology\* Information & Communication Engineering\* Control Science and Technology \* Computer Science and Technology\* Software Engineering\* Material Science and Engineering Chemical Engineering and Technology\* Environmental Science and Engineering Biomedical Engineering Management Science and Engineering Humanities and Social Sciences Mathematics Physics Chemistry \* Economics Law \* Foreign Languages Design and Arts Education

# Master Programs in English

# Aeronautics & Space Science and Technology

Advanced Computational Fluid Dynamic; Continuum Mechanics; Principles of Composite Material Mechanics; Structural Dynamics; Fundamentals of Aerospace Propulsion; Orbital Mechanics Guidance and control theory for flight vehicle; Automated Rendezvous and Docking of Spacecraft; Reactive Flow in Jet Propulsion

# Chemistry

Inorganic Synthesis and Preparative Chemistry; Advanced Experiment of Organic Chemistry; Materials Science; Advanced Topics in Organic Chemistry; X-Ray Crystallography; Coordination Chemistry; Spectrometric Identification of Organic Compounds; Nano-science and technology

### nformation and Communication Engineering

Statistical Signal Processing; Information Theory; Advanced Digital Communications; Fundamentals of Communication Networks; Signal detection and estimation theory; Microwave and Millimeter wave integrated circuits Design and Technology; Introduction to Radar Systems; Mobile Communications

# Chemical Engineering and Technology

Advanced Organic Chemistry; Metal-organic Chemistry; Advanced Experiment of Organic Chemistry; Modern Electrochemistry; Principles of Catalysis Spectrometric Identification of Organic Compounds; Advanced Topics in Organic Chemistry; Advanced Chemical Technology

# Computer Science and Technology

Advanced Operating Systems; Computer Vision; Content Management and Technology of Digital Library; Wireless Networks and Mobile Computing; Web Mining Web; Network information security; Machine Learning and Knowledge Discovery; Algorithms and Complexity; Theory of Computation

# Control Science and Technology

Linear Algebra with Applications in Automatic Control; Linear Systems Theory; Optimum and Robust Control; Stochastic Process Theory and Applications; System Identification and Adaptive Control; Modern Sensor and Detection Technology; Systems engineering principle and applications;

# Electronics Science and Technology

Statistical Signal Processing; Information Theory; Advanced Digital Communications; Fundamentals of Communication Networks; Signal detection and estimation theory; Microwave and Millimeter wave integrated circuits Design and Technology; Introduction to Radar Systems; Mobile Communications

# Law

Public International Law; International Economic Law; Private International Law; WTO Law;International Intellectual Property Protection; Chinese Trademark Law and Unfair Competition; Chinese Patent Law; Chinese Copyright Law

# Mechanical Engineering

Fundamentals of Modern Control Theory; Modern Measurement Technology; Elastic-Plastic Mechanics; Mechanical Vibration; Advanced Engineering Thermodynamics and Heat Transfer;Principle of Finite Element Method; Principles of CAD/CAM/CAE; Structural Design with Optimization Method

# Software Engineering

Advanced Software Engineering; Software Architecture; Object-oriented methodologies and technology; Business Information Management and ERP; Software Project Management; Software Service Engineering Advanced Database Technology; Advanced Computer Networks

# Ph.D. Programs in Chinese & English

Aeronautics & Space Science and Technology Safety Science and Engineering Mechanical Engineering Dynamic Mechanical and Engineering Optical Engineering Instrument Science and Technology Electronic Science and Technology Information & Communication Engineering Control Science and Technology Computer Science and Technology Software Engineering Material Science and Engineering Chemical Engineering and Technology Environmental Science and Engineering Biomedical Engineering Mathematics/Physics/Chemistry Management Science and Engineering Economics Law

il in a

Education



# Economics Degree Programs in English September 2016 Fall semester

# Undergraduate Programs in English

- Economics and Finance
- Economics and International Business

# **Undergraduate Programs**

# Economics and Finance Program

# Master Program in English

- Theoretical Economics (Economics and Finance)

# Exchange Program in English

# Economics We welcome exchange students to study Economics Program in Enlish!

This program aims to acquaint students with the economic and financial aspects of modern society, to familiarize them with technical problems of economics. On the basis of economy, the program focuses on providing professional training on economic and financial theories, and on developing the students' ability to understand, analyze, and evaluate the public policy.

Graduates of this major may be engaged in economics and finance related analyzing, predicting work for government, research institutes, and financial enterprises. Graduates also can carry out management tasks in government organizations and enterprises.

Main Courses: Principles of Economics I & II, Microeconomics, Macroeconomics, Applied Statistics, Econometrics, International Finance, Public Economics, Money and Banking, Public Finance, Investment, Financial Risk Management, etc.

### Economics and International Business Program

This program aims to acquaint students with systematical theories and analyzing methods of Economics and Finance, and with the knowledge of routines of international business activities under the background of globalization and digital economy. This program enhances the achievement during international business by effectively using economic knowledge, and cultivates students to be compound economic and managerial talents who lead and innovate international business.

Graduates of this major may be engaged in international trade work in Import & Export corporations and relevant institutions, and may also be engaged in administrative work in multi-national enterprises and institutions.

Main Courses: Principles of Economics I & II, Microeconomics, Macroeconomics, Applied Statistics, Econometrics, International Finance, Public Economics, Theory and Practice of International Trade, International Business, International Investment, Law of International Trade, etc.



# Master Program

CHINA

### Theoretical Economics (Economics and Finance) Program

The primary objective of the graduate program is to educate students as professional researchers in the fields of economics and finance as well. Students will acquire the essential knowledge necessary for career economists as professors or analysts in financial institutions, such as insurance companies, security companies, fund companies, and so on.

Main Courses: Microeconomics, Macroeconomics, Applied Statistics, Financial Econometrics, Corporate Finance, International Finance, Topics on Economics and Finance, Financial Engineering, Assets Market Analysis, Insurance and Risk Management, etc.

# **Exchange Students Program**

### Economics Program

International Class in Economics Department, School of Humanities and Social Sciences, is an important initiative for fulfilling the Strategy of International Education in the School of Humanities and Social Sciences. In the international education environment, the international class introduces advanced international teaching ideas, fully utilizes high-quality education resources, and expands the channel for international cooperation and communication. This program, following international students' training standards, acquaints students with international aspects and high practice.

Courses for international class students are in English or partly in English. The faculty represents a wide spectrum of interests and conducts research on a broad range of topics. Most fields of economics are covered, including microeconomic theory, macroeconomic theory, econometrics, money and banking, financial engineering, economic development, industrial organization, labor economics, applied statistics, public finance, political economy, law and economics, international finance. The faculty includes some teachers in the economics departments and several foreign teachers.

### Main Courses:

Principles of Economics I & II, Microeconomics, Applied Statistics, Econometrics, International Finance, Introduction to Sociology, Introduction to Modern Science and Technology, Practical Course (in Cambridge, UK).



# Chinese Language Programs

### Long-term Chinese Programs

- 🧇 8 levels
- 16 weeks each semester and 20 -24 hours per week
- Semesters start in March or September each year
- Focus on improving the communication skills;
- 💎 Small group study
- 🧇 Free HSK training
- Various Chinese culture experience
- Field trips: Great Wall, Forbidden City, Summer Palace, ect

# Pre-University Programs

- Reach the level of degree courses admission through
  - 1 or 2 semester of Chinese learning.
  - Curriculum: Chinese Language, Science & Engineering courses in Chinese
  - Free HSK training.

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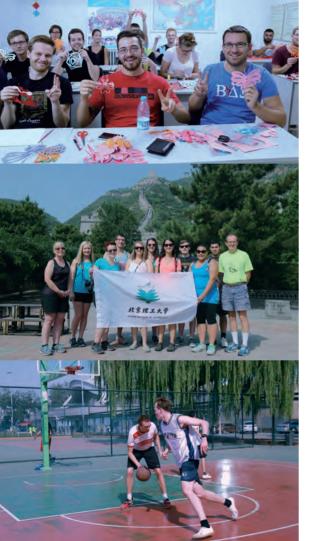
The priority to receive Beijing government scholarship
Enter the degree course without application

### Short-term Programs (Engineering & Culture)

- 2~8 weeks offered during summer and winter vacations (min 10 person)
- 15~20 teaching hours per week
- Lectures: Chinese Culture & History, Society & Economy, Policy and New Technology.
- Culture experience: Calligraphy, Ink painting, Kung-Fu, etc
- Tours: Forbidden City, Great Wall, Summer Palace, Temple of Heaven, etc.(1 or 2 times a week)Language partner for everyone
- Certificate for courses completed
- All the arrangement can be adjusted flexibly.

# **VIP** Programs

- Programs available on weekdays and weekends
- Excellent and experienced teachers
- Small-classes (1 person to 6 person max.)
- Levels: primary, intermediate, advanced Chinese
- Special programs: Business or Science Chinese class, HSK Learning materials included
- Application: Open all year round



# How to Apply?



- 1 Create an account at http://apply.isc.bit.edu.cn
- 2 Fill in online application form (Upload required documents)
- 3 Waiting for University response
- 4 Print out application form and submit hardcopy of all the required materials to the University

### Undergraduate Programs

Ms. HAO Mengfan Tel: +86-10-68918706 +86-13811712016 undergraduate@bit.edu.cn

# Graduate Programs

Ms. ZHENG Ye	Tel: +86-10-68918083	+86-13810175529
	master_phd@bit.edu.cn	

# Chinese Language Programs

Ms. ZHENG Hailan Tel: +86-10-68912847 +86-13681519360 studychinese@bit.edu.cn

# What scholarship programs do we have?

# 1. Chinese Government Scholarship (CSC)

### What does the scholarship cover?

Application fee, tuition, accommodation, Comprehensive Medical Insurance.

Stipend: Undergraduate students: CNY 2,500 per month;

Master's students / general scholars: CNY 3,000 per month;

Doctoral students / senior scholars: CNY 3,500 per month.

# Who can apply?

Applicants are non-Chinese citizens and in good health;

Applicants are not registered students in Chinese universities at the time of application;

Applicants are not applying for non-degree programs;

Applicants who have graduated from Chinese universities for more than one year;

Applicants for Master programs should be under the age of 35 and hold a bachelor's degree;

Applicants for PhD programs should be under the age of 40 and hold a master's degree.

# How to Apply?

Register at http://laihua.csc.edu.cn, BIT's Agency No. is 10007.

Send application materials to BIT by master\_phd@bit.edu.cn (check http://isc.bit.edu for details).

Application deadline: April 15th / every year

Contact: Ms. ZHENG Ye (See contact information)

# 2. Central Europe Special Scholarship

### What does the scholarship cover?

Tuition and Accommodation.

### Who can apply?

Countries: Albania, Austria, Bulgaria, Bosnia and Herzegovina, Croatia, Czech, Estonia, Germany, Hungary, Latvia, Liechtenstein, Lithuania, Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia, Slovenia, Switzerland; More than 6 months study period;

The student's home university must recognize the credits that the students earned in the Chinese universities.

### How to Apply?

Register at http://apply.isc.bit.edu.cn

Application deadline: Spring semester: Oct.15<sup>th</sup>, 2015- Jan.15<sup>th</sup>, 2016 Fall semester: Mar 15<sup>th</sup>, 2016- June 15<sup>th</sup>, 2016

Contact: Ms. ZONG Xin (See contact information)



# 3. Sino-US Cultural Communication Special Scholarship

### What does the scholarship cover?

Tuition and Accommodation.

# Who can apply?

US citizens in good health; More than 6 months study period; The student's home university must recognize the credits that the students earned in the Chinese universities.

# How to Apply?

Register at http://apply.isc.bit.edu.cn

# Application deadline:

Spring semester: Oct 15<sup>th</sup>, 2015- Jan 15<sup>th</sup>, 2016 Fall semester: Mar 15<sup>th</sup>, 2016- June 15<sup>th</sup>, 2016

Contact: Ms. ZONG Xin (See contact information)

**Note:** US Students who apply for degree study, please see CSC application procedure and Stipend.





# 4.Beijing Municipal Government Scholarship

### What does the scholarship cover?

Tuition (Full scholarship, Half scholarship, 1/4 scholarship)

### Who can apply?

Non-Chinese Citizens in good health; Age between 18-30; Qualified previous academic records.

### How to Apply?

Register at http://apply.isc.bit.edu.cn

### Application Open from Jan $1^{st}$ , 2016 to Jun $30^{th}$ , 2016

Contact: Ms. MA Wei (See contact information)

# 5. Confucius Institute Scholarship

# What does the scholarship cover?

Tuition, accommodation, Comprehensive Medical Insurance.

Stipend: Undergraduate students: CNY 2,500 per month; Master's students / general scholars: CNY 3,000 per month.

### Who can apply?

Non-Chinese Citizens in good health; Chinese Language students in Confucius Institute.

# How to Apply?

http://www.csc.edu.cn/Laihua/scholarshipdetailen.aspx?cid=218& id=2728

# Application deadline: May 10th, 2016

# Contact:

Division of Scholarships, Confucius Institute Headquarters / Hanban Address: 129, Deshengmenwai Street, Xicheng District, Beijing, 100088.

Fax: +86-10-58595727

Email: scholarships@hanban.org

Confucius Institute Scholarship Website: http://cis.chinese.cn HSK and HSKK Website: http://www.chinesetest.cn





Item 6- 10 please see http://www.csc.edu.cn/Laihua/scholarshiplisten.aspx?cid=97

# Tuition

Undergraduate Programs	Master Programs	Doctoral Programs	Chinese Language Programs	Short-term Programs
Programs in Chinese: CYN 23,600 /year (≈USD 3810) including CNY 600 insurance / year	CYN 32,600 /year (≈USD 5,400) including ar CNY 600 insurance / year CNY45,000 (≈USD 1,400) including CNY 300 insurance / semester	CNY45,000	CNY 8,500 / semester (≈USD 1,400) including CNY 300	USD 45-60/day (Including tuition, accommodation,
Programs in English: CYN 30,600 /year (≈USD 5,100) including CNY 600 insurance / year	Programs in English: CYN 36,600 /year (≈USD 6,000) including CNY 600 insurance / year	(≈USD 7,400) including CNY 600 insurance / year	Pre-university: CNY 10,300 / semester (≈USD 1,700) including CNY 300 insurance / semester	insurance, field trips to the Forbidden City, Summer Palace, Great Wall, etc.)

Note: Application fee for degree programs CNY 600, non-degree programs CNY 500

# Accommodation Information

Location	Room types	Facilities	Price
Building No.14 Zhong Guan Cun Campus	Double bedroom	Air-conditioner, desk, wardrobe, Internet access, bathroom(24-hour hot water), public kitchens, public laundry	CNY1350 /person/ month
Building No.14 Zhong Guan Cun Campus	4 Loft beds with desk	Air-conditioner, desk, wardrobe, Internet access, bathroom(24-hour hot water), public kitchens on each floor, public laundry	CNY450 / person / month
Su Zhou Qiao Dormitory Zhong Guan Cun Campus	Triple Bedroom	Air-conditioner, desk, wardrobe, Internet access, refrigerator, public bathroom (24-hour hot water),public kitchens on the top floor, public laundry	CNY1350 /person/ month
Liang Xiang Campus	2 Loft beds with desk	Desk, wardrobe, Internet access, refrigerator, bathroom, kitchen ventilator	



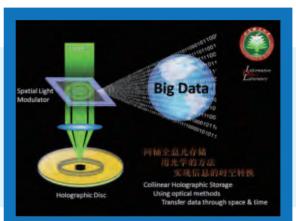
# Microwave radar measurement technique

Professor Wu Siliang, the winner of the First-prize of the 2013 State Technological Invention Award.

-Information & Electronics



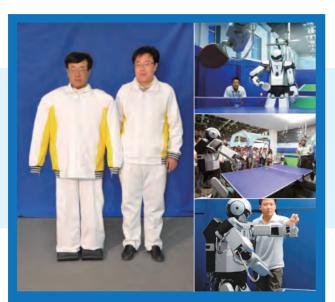




### Big data optical storage technology

Using optical methods to transfer data through space and time.

Optoelectronics



### Humanoid Robots

Humanoid Robots can distinguish high-speed objects, make dynamic balance, and play table tennis with each other.

Mechatronics Engineering

# BELLING HAD VIEW

### Simulation software

Simulation software was utilized for rehearsing the opening and closing ceremonies of the Olympic Games.

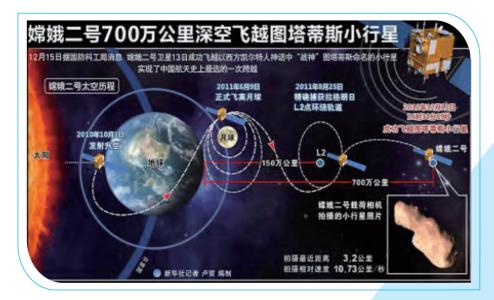
-Software Engineering



Countdown

Athletes Parade

# **BEIJING INSTITUTE OF TECHNOLOGY**



### Deep space exploration

Chang'e II trajectory for Sun-Earth L2 Lissajous orbit realized. Trajectory design for Lunar Orbiter Chang'e II to detect the small planet Toutatis, which is 7,000,000 km away from the Earth.

-Aerospace Engineering

# **BEIJING IN**



### Unmanned vehicle

RAY, the seventh generation of unmanned vehicle of BIT won the first prize of "China Smart Vehicle Challenge", in 2013.

-Mechanical Engineering

# STITUTE OF TECHNOLOGY

New Energy Vehicles Zero-emission electric cars and buses. -Mechanical Engineering



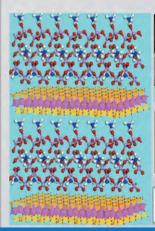


Environmentally friendly firework -Chemical & Environmental Engineering



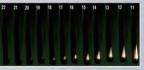
High efficiency, environmental protection, low cost.

# APP-MMT Nanocompounds





**TEM of APP-MMT** 



High-efficient, environment-friendly, low-cost inorganic flame retardant



# **BEIJING INSTITUTE OF TECHNOLOGY**



# Wonderful Campus Life









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# **Beijing Institute of Technology** Office of International Students

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