Beijing Institute of Technology

Going to the Best Institute of Technology
Overview
Beijing Institute of Technology

- An open, public, research-oriented university with a focus on science and technology
- The 10th university approved to enter “985 Project”, which developed 39 Chinese universities aiming at the world class research-oriented universities since May 1998.
- One of the first 15 universities approved to enter “211 Project”, which aims to cultivate 100 key institutions of higher education in China for the 21st century.
- One of the first 16 national key universities in China.

- The annual research fund ranks top 10 among the universities in China.
- Received more than 130 national awards in science and technology in the past 30 years, ranking among Top 10 in China.
- Employment rate for undergraduates upon graduation exceeds 97% (from 2008 to 2012).
- Employer Reputation ranks the 5th among all Chinese universities and the 169th in the world in QS2012-2013.
Early History (1940-1952)

- 1940 --- Founded in Yan’an and originally named as Academy of Natural Sciences
- 1949 --- Moved to Beijing
- 1952 --- Renamed as Beijing Institute of Technology (BIT) after merging with the Sino-French University

Founder T. L. Tsu (1877 ~ 1968)
History

Milestone events after 1952

- 1959 --- Approved to be one of the 16 national key universities which were authorized to offer graduate degrees

- 1988 --- Changed its Chinese name from “Institute” to "University", while the English name remained unchanged.

- 1995 --- Admitted to one of the 15 first-tier “Project 211” universities (State Educational Project)

- 2000 --- Admitted to be No. 10 university in “Project 985” (State Educational Project)
BIT Location & Campuses

Main Campus
Downtown, Beijing

Liangxiang Campus
Southwest, Beijing

Xishan Campus
Northwest, Beijing

Map of Beijing
Major Domestic Network

- **4th Chair university** --- Network of 56 Universities in Beijing for International Talents Import Programs
- **Member** --- Alliance of 9 Top Technical Universities in “Project 985”
- **Member** --- Alliance of 7 Top Technical Universities Affiliated under Ministry of Industry and Information Technology (MIIT)
### Figures 2013

**Employees**

<table>
<thead>
<tr>
<th>Role</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty</td>
<td>2,005</td>
</tr>
<tr>
<td>Staff</td>
<td>1,499</td>
</tr>
</tbody>
</table>

**Full-time Students**

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduates</td>
<td>15309</td>
</tr>
<tr>
<td>Masters</td>
<td>8,075</td>
</tr>
<tr>
<td>Ph.D Candidates</td>
<td>3,037</td>
</tr>
<tr>
<td>International Students</td>
<td>900</td>
</tr>
<tr>
<td>Pre-University Students</td>
<td>678</td>
</tr>
</tbody>
</table>

| Total                  | 27,999  |

Faculty of Mechanical & Transportation Engineering

- School of Aerospace Engineering
- School of Mechatronical Engineering
- School of Mechanical Engineering

Faculty of Information & Electronics

- School of Optoelectronics
- School of Informatics and Electronics
- School of Automation
- School of Computer Science and Technology
- School of Software

Faculty of Natural Science & Material Engineering

- School of Material Science and Engineering
- School of Chemical & Environmental Engineering
- School of Life Science
- School of Mathematics and Statistics
- School of Physics

Faculty of Humanities & Social Sciences

- School of Management and Economics
- School of Humanities and Social Sciences
- School of Law
- School of Foreign Languages
- School of Design and Arts
Programs

- 19 postdoctoral programs
- 95 doctoral programs
- 207 master programs
- 64 undergraduate programs

Top Ranking Programs in China

- Mechanical Engineering
- Weapon Science and Technology
- Engineering Mechanics
- Power Machinery and Engineering
- Optical Engineering
- Physical Electronics
- Information and Communication Engineering
- Control Theory and Control Engineering
- Applied Chemistry
- Material Science and Technology

ESI World Top 1% Subjects by May 2012

- Chemistry
- Engineering
- Material Science
- Physics
- Mathematics
Programs

Master Programs taught in English

- Control Theory and Control Engineering
- Electronics Science and Technology
- Electronic Engineering
- Solid Mechanics
- Master of Business Administration (International Group)
- Applied Economics
- International Law
- Chemistry Engineering and Technology
- Neurobiology
- Computer Science and Technology
- Mechanical Engineering
- Psychology

Bachelor Programs taught in English

- Mechanical Engineering
- Automation
- Electronics
- International Economy and Trade
Programs

Partners for Double Degree Program (Graduate Programs)

◆ University of Technology, Sydney
◆ The University of Newcastle, Australia
◆ The University of Western Australia
◆ Australian National University
◆ Swinburne University of Technology

Partners for Double Degree Programs (Undergraduate Programs)

◆ The Australian National University, Australia
◆ University of Waterloo, Canada
◆ The University of Manchester, UK
◆ Polytechnic University of Turin, Italy
◆ Stevens Institute of Technology, USA
◆ Missouri University of Science and Technology, USA
◆ Illinois Institute of Technology, USA
Notable Alumni

P. Li, Premier, Chairman of NPC Standing Committee, China

Q. H. Zeng, Vice President, China

X. P. Ye, Vice Chairman of CPPCC, China

S. L. Peng, FCAS, FCAE, Chief designer for nuclear-powered submarines

G. X. Xie, FCAS, Chief designer for Long March III rockets

X. M. Wang, FCAE, 2012 State Top Science and Technology Awardee
Research
Awards
Received more than 130 national awards in science and technology in the past 30 years, ranking among Top 10 in China.

Annual Research Fund
Annual research fund in 2012 amounts to RMB 1.8 billion, ranking Top 10 in China.

Increasing Trend of Annual Research Fund
<table>
<thead>
<tr>
<th>Type of Laboratory</th>
<th>Name of Laboratory</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Key Laboratory</td>
<td>State Key Laboratory of Explosion Science and Technology</td>
</tr>
<tr>
<td>State Engineering Laboratory</td>
<td>Laboratory of Electric Vehicle</td>
</tr>
<tr>
<td>Key Laboratories of National Defense Technology</td>
<td>Laboratory of Mechatronical Engineering and Control</td>
</tr>
<tr>
<td></td>
<td>Vehicle Transmission Laboratory</td>
</tr>
<tr>
<td></td>
<td>Damage and Protection Laboratory</td>
</tr>
<tr>
<td>MoE Key Laboratories</td>
<td>Laboratory of Photoelectric Imaging Technology and System</td>
</tr>
<tr>
<td></td>
<td>Laboratory of Intelligent Control of Complex Systems and Decision-making</td>
</tr>
<tr>
<td></td>
<td>Atomic Molecular Cluster Science Laboratory</td>
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</tbody>
</table>
# Laboratories & Research Centers

<table>
<thead>
<tr>
<th>Type of Laboratory</th>
<th>Name of Laboratory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key disciplinary laboratories of national defense</td>
<td>Advanced processing technology laboratory</td>
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<tr>
<td></td>
<td>Military vehicle dynamical technology laboratory</td>
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<tr>
<td></td>
<td>Multi-information system laboratory</td>
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<tr>
<td>State key laboratories of disciplines</td>
<td>Automobile power performance and emission test lab</td>
</tr>
<tr>
<td></td>
<td>Color science and engineering laboratory</td>
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<tr>
<td></td>
<td>Signal acquisition and processing laboratory</td>
</tr>
<tr>
<td></td>
<td>Flame retardant materials research laboratory</td>
</tr>
<tr>
<td>Beijing Municipal Key Laboratories</td>
<td>5</td>
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<tr>
<td>MoE Open laboratory</td>
<td>1</td>
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<tr>
<td>Laboratories of other categories</td>
<td>21</td>
</tr>
<tr>
<td>State experimental teaching demonstration center</td>
<td>2</td>
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<tr>
<td>Beijing experimental teaching demonstration center</td>
<td>11</td>
</tr>
<tr>
<td>University-level experimental demonstration center</td>
<td>10</td>
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</tbody>
</table>
Historic Records

The first sounding rocket in China, developed by BIT, was launched in 1958.

The first low-angle, height finding radar in China, designed by BIT, was put into use in 1950’s.

The first planetarium in China produced by BIT in 1958.

The first TV system in China was designed and established by BIT in 1958.
New Breakthroughs in Mechanical Engineering

Electrically powered buses for the Beijing Olympic Games in 2008 and Shanghai World Expo in 2010

Ionic coating technology for heating protection, surface hardening, etc.

Hydrogen internal-combustion engine in various tests
New Breakthroughs in Software Engineering

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

**Virtual ecological society** aims to identify the true CO2 source and the feasible methods to reduce emissions in real world.
New Breakthroughs in Chemical & Environmental Engineering

A novel conducting polymer hydro-gel with 2D building blocks indicates promising application to purifying waste water containing organic dyes.

Environmentally friendly firework invented for the opening ceremonies of both Beijing Olympic Games in 2008 and Shanghai World Expo in 2010.
New Breakthroughs in Aerospace Engineering

Deep space exploration: Trajectory design for Lunar Orbiter Chang’e II to detect the small planet Toutatis, which is 7,000,000 km away from the Earth in 2012.
New Breakthroughs in Mechatronics

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

**Laser fabrication:** betavoltaic batteries with ultra-high power density and ultra-long lifetime; MZI sensors with ultra-sensitive, high-temperature performance.
Real-time signal processor of microwave radar for Spacecraft Shenzhou VIII unmanned docking with Space Module Tiangong I in October 2011

Terahertz technology: monolithic integrated circuit of Schottky diodes and quasi-optical mixer/detector
New Breakthroughs in Optoelectronics

Adaptive optics: high resolution imaging for deep space exploration and space laser communication

Laser differential confocal measurement designed for National Institute of Metrology

Virtual reality technology enables people to restore the destroyed Yuan-Ming Royal Garden visually.
Contribution to the Generalized Dipper--James--Murphy Conjecture

The generalised Dipper-James-Murphy Conjecture claims that for arbitrary $r$ the set of $(Q,e)$-restricted multi-partitions gives a labeling of the simple modules over the algebra $H_{r,1,n}$. Recently, Professor Hu Jun from the School of Mathematics at BIT has made some breakthrough towards the generalised DJM conjecture. He proved that the generalised DJM conjecture is true if $e=0$ and for arbitrary $e$ the two notions (i.e., Kleshchev multi-partition and $(Q,e)$-restricted multi-partition) coincide whenever the multi-partition in question is a multi-core. His paper “On a generalisation of the Dipper-James-Murphy conjecture” was published in the prestigious “Journal of Combinatorial Theory, Series A”. He was also invited to give a plenary talk on this result at the International Workshop on Quantized Algebras and Physics in 2009.
New Breakthroughs in Physics

Contribution to the study of asymptotic behavior of the biharmonic Steklov eigenvalues

Spectral asymptotics for partial differential operators have been the subject of extensive research for over a century. It has attracted great attention from many outstanding mathematicians and physicists. In particular, the study of asymptotic behavior of the biharmonic Steklov eigenvalues has been a longstanding and challenging problem in the past 50 years. Prof. Liu Genqian’s result establishes a Weyl-type important formula to this open problem, which shows that if one knows the spectrum of the biharmonic Steklov problem on a bounded domain, then one can know the area of the boundary of this domain.
New Breakthroughs in Biological & Medical Engineering

Experiments of human genomes on orbit: micro-fluidic chip device returned from Spacecraft Shenzhou VIII

Exploring the trace of life in space via space biological and biomedical experiments.
New Breakthroughs in Design & Arts

Digital Interactive Arts

Ceramics Studio

Student design gaining the Sliver Award of the 9th China Environmental Art Design School in 2011
New Breakthroughs in Law

2013 APSCO Space Law & Policy Forum organized by BIT

BIT Students gaining awards successively at the International Space Law Moot Court Competition

BIT Professor giving lecture at the 56th conference of UNCOPOUS (United Nations Office for Outer Space Affairs) as the only delegate from Chinese university
International Links
Global Partnerships

Strategic partnerships with over 202 universities from 57 countries and regions

UCD, NUI (Galway)
University of Manchester
University of Leeds
University of Leicester
University of Reading

RWTH Aachen,
ETH, TU Munich,
KIT, TU Berlin

KTH TKK
University of Turin
Politecnico di Torino

Warsaw University of Technology
"Lucian Blaga" University of Sibiu
Yerevan State University

Moscow State University
Moscow State Technical University
Belarusian National Technical University

Tokyo Institute of Technology
Waseda University
Ewha Womans University
Konkuk University

Sonora Institute of Technology
Pontifical Catholic University of Chile
Federal University of Paraiba
National University of San Marcos
National University of Cordoba

UPM, UPV, UPC
Polytechnic University of Turin
University of Turin
University of Porto

University of Lagos
University of Pretoria
Menofia University
Kwame Nkrumah University of Science and Technology

ANU, UWA, UTS
Newcastle, La Trobe
Massey University
Key International Platforms

Spain

University of British Columbia
University of Waterloo
University of Laval
Simon Fraser University
University of Virginia
University of Pittsburgh
University of California Berkley
University of California San Diego
Georgia Institute of Technology
Illinois Institute of Technology
Stevens Institute of Technology

Canada

University of Tennessee
University of Michigan
University of Wisconsin
University of Connecticut
University of British Columbia

USA

University of California

Germany

University of Hannover
University of Stuttgart
TU Darmstadt

Australia

The Australian National University
The University of Newcastle
The University of Western Australia
University of Technology, Sydney
La Trobe University
Swinburne University of Technology

Russia

Moscow State Technical University
Saint-Petersburg State Electrotechnical University
Samara State Aerospace University
Moscow Power Engineering Institute
Mendeleyev University of Chemical Technology
Irkutsk State University
Ural Federal University
Kazan (Volga region) Federal University
Belarusian National Technical University

Belarus

Technical University of Munich
RWTH Aachen
Technical University of Berlin
Karlsruhe Institute of Technology
Dresden University of Technology
University of Hannover
University of Stuttgart
TU Darmstadt

NEXT ...
Communication with Foreign Embassies

Lectures delivered by education counselors from foreign embassies in Beijing
Cooperation with International Enterprises
<table>
<thead>
<tr>
<th>Joint Research Centers</th>
<th>Partners</th>
<th>Year</th>
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<tbody>
<tr>
<td>1 Joint Research Center for Structure and Safety</td>
<td>Ruhr-University Bochum</td>
<td>2009</td>
</tr>
<tr>
<td>2 Joint Research Center for German Language and Culture</td>
<td>University Karlsruhe</td>
<td>2010</td>
</tr>
<tr>
<td>3 Joint Laboratory for Remote control</td>
<td>Tokyo Institute of Technology</td>
<td>2010</td>
</tr>
<tr>
<td>4 Joint Research Center for Urban and Public Safety</td>
<td>Hong Kong Polytechnic University</td>
<td>2010</td>
</tr>
<tr>
<td>5 Joint Research Center for Optomechatronics Engineering</td>
<td>Chinese University of Hong Kong</td>
<td>2010</td>
</tr>
<tr>
<td>6 BIT-Ericsson Research Center of Digital Communication Technology</td>
<td>Ericsson</td>
<td>2011</td>
</tr>
<tr>
<td>7 Joint Laboratory for Driver Behavior and Traffic Safety</td>
<td>Technical University of Munich</td>
<td>2011</td>
</tr>
<tr>
<td>8 Joint Research Center for Neural Informatics</td>
<td>University of Hong Kong</td>
<td>2011</td>
</tr>
<tr>
<td>9 Joint Laboratory for Scalable Computing</td>
<td>Illinois Institute of Technology</td>
<td>2011</td>
</tr>
<tr>
<td>10 Joint Laboratory for Language Information Computing</td>
<td>German Research Center for Artificial Intelligence</td>
<td>2011</td>
</tr>
<tr>
<td>Joint Research Centers</td>
<td>Partners</td>
<td>Year</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>-----------------------------------------------------------------</td>
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</tr>
<tr>
<td>11 Joint Technology Center for New Energy</td>
<td>Moscow Power Engineering Institute</td>
<td>2011</td>
</tr>
<tr>
<td></td>
<td>Samara State Aerospace University</td>
<td></td>
</tr>
<tr>
<td></td>
<td>D.I.Mendeleyev University of Chemical Technology</td>
<td></td>
</tr>
<tr>
<td>12 Joint Research Center for Technology Innovation</td>
<td>Georgia Institute of Technology</td>
<td>2011</td>
</tr>
<tr>
<td></td>
<td>University of Manchester</td>
<td></td>
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<tr>
<td>13 Joint Research Center for Pneumatics</td>
<td>SMC</td>
<td>2012</td>
</tr>
<tr>
<td>14 Joint Laboratory for New Concept Power-Train and Energy</td>
<td>University of Newcastle</td>
<td>2012</td>
</tr>
<tr>
<td>15 Joint Laboratory for Surface Engineering</td>
<td>University of Auckland</td>
<td>2012</td>
</tr>
<tr>
<td>16 Joint Research Center for Translational Neurobiology</td>
<td>Roscamp Institute</td>
<td>2012</td>
</tr>
<tr>
<td>17 Joint Research Center for Family Business</td>
<td>University of Wolverhampton</td>
<td>2012</td>
</tr>
<tr>
<td>18 Joint Research Center for New Energy Vehicle System Dynamics and Control</td>
<td>ETH Zurich</td>
<td>2012</td>
</tr>
<tr>
<td>19 Joint Research Center for Flame Retardant Science and Technology</td>
<td>Polytechnic University of Turin</td>
<td>2012</td>
</tr>
</tbody>
</table>
Students Exchange Programs

- Student exchange agreements with about 50 prestigious universities around the world
- 100 graduate scholarships from China Scholarship Council annually
Students Exchange Programs

Europe
University of Aberdeen (2010)
University of Manchester (2010)
UCD (2009)
RWTH (2008)
TU München (2008)
Ecole Polytechnique Universitaire de Tour (2008)
Universidad Politécnica de Valencia (2006)
Karlsruhe TH (2006)
Royal Institute of Technology (KTH) (2005)
Universidad Politécnica de Madrid (2004)
Dresden TU (1998)
Samara State Aerospace University (1990)
TU Berlin (1984)

North America
University of Waterloo (2010)
University of Laval (2010)
Simon Fraser University (2013)
Missouri S&T (2010)
UCSD (2008)
Stevens Institute of Technology (2008)
Mississippi State University (2006)
Purdue University (2005)
Illinois Institute of Technology (2003)
University of Saskatchewan (2005)
Northeastern University (2012)

Australia
The University of Western Australia (2008)
The Australian National University (2007)
The University of Newcastle (2007)

Asia
The Hong Kong Polytechnic University (2005)
Konkuk University (2008)
Waseda University (2006)
Kobe Design University (2003)
Nagoya Institute of Technology (1997)
Tokyo Institute of Technology (1993)
Chiba Institute of Technology (1990)
International Students

- BIT has about 700 international students.
- BIT International student alumni are distributed among 94 countries.

[Pie chart showing the distribution of students by category: Undergraduate 39.60%, Master 19.20%, Ph. D 10.80%, Language Student 6.60%, Senior advanced student 20.40%, Advanced student 1.80%, and Other 1.60%]
The BIT Summer School Program is a four-week program designed for international students who are interested in Chinese language and culture. Participants will have four weeks of intensive Chinese language and culture study on campus, and weekend off-campus tours to some of China’s most important historic and scenic spots.
International Students

BIT soccer team keeps the championship among the Chinese universities and won the 7th place in the World Match of College Students in 2011. In July 2013, BIT soccer team represented China and won the 12th place in the 27th Summer Universiade in Kazan.

International students have enhanced BIT’s performance in bilingual education, colorful culture, sports, etc.
THANKS!

For more information, please contact us:

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