



北京交通大学
Beijing Jiaotong University



Beijing Jiaotong University

北京交通大学





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Introduction

- **Ph.D. on medical image processing**
- **Associate Professor in Beijing Jiaotong University**
- **Ph.D. Supervisor**
- **Director of European affairs of School of Computer and Information Technology, BJTU, China**
- **Research interests:**
 - **Image processing – segmentation registration; interpolation; regularization**
 - **Medical image reconstruction**
 - **Machine learning based medical image analysis**



Introduction - BJTU Today

1. Campus

Haidian Campus

Total Area 1000 *mu* (66.7 Hectare)



Weihai Campus

Covering an area of 1099 *mu*
(73.3 Hectare)



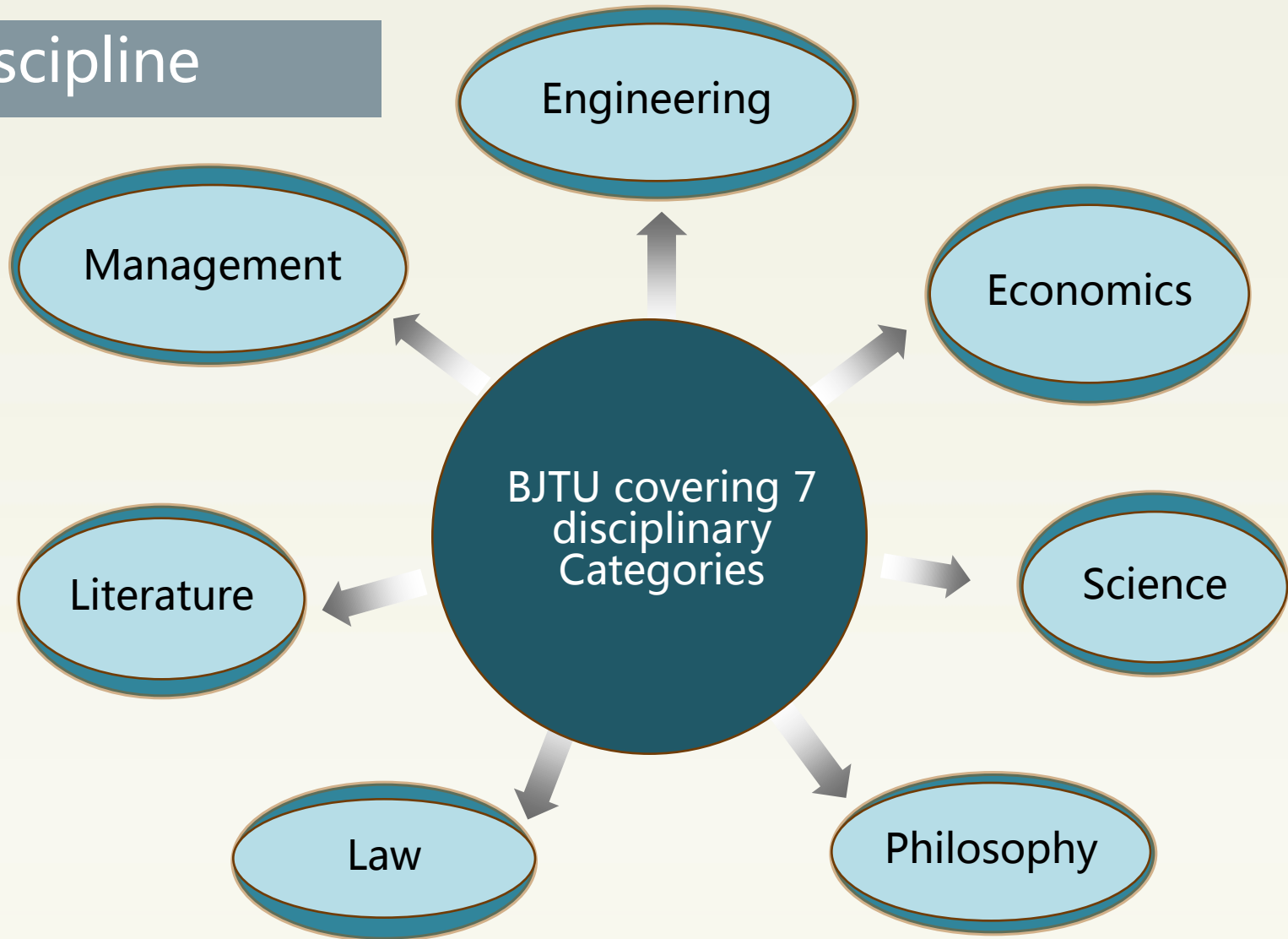
Huanghua Campus

Covering an area of 1500 *mu*
(100 Hectare)



Introduction - BJTU Today

2. discipline



Introduction-BJTU Today

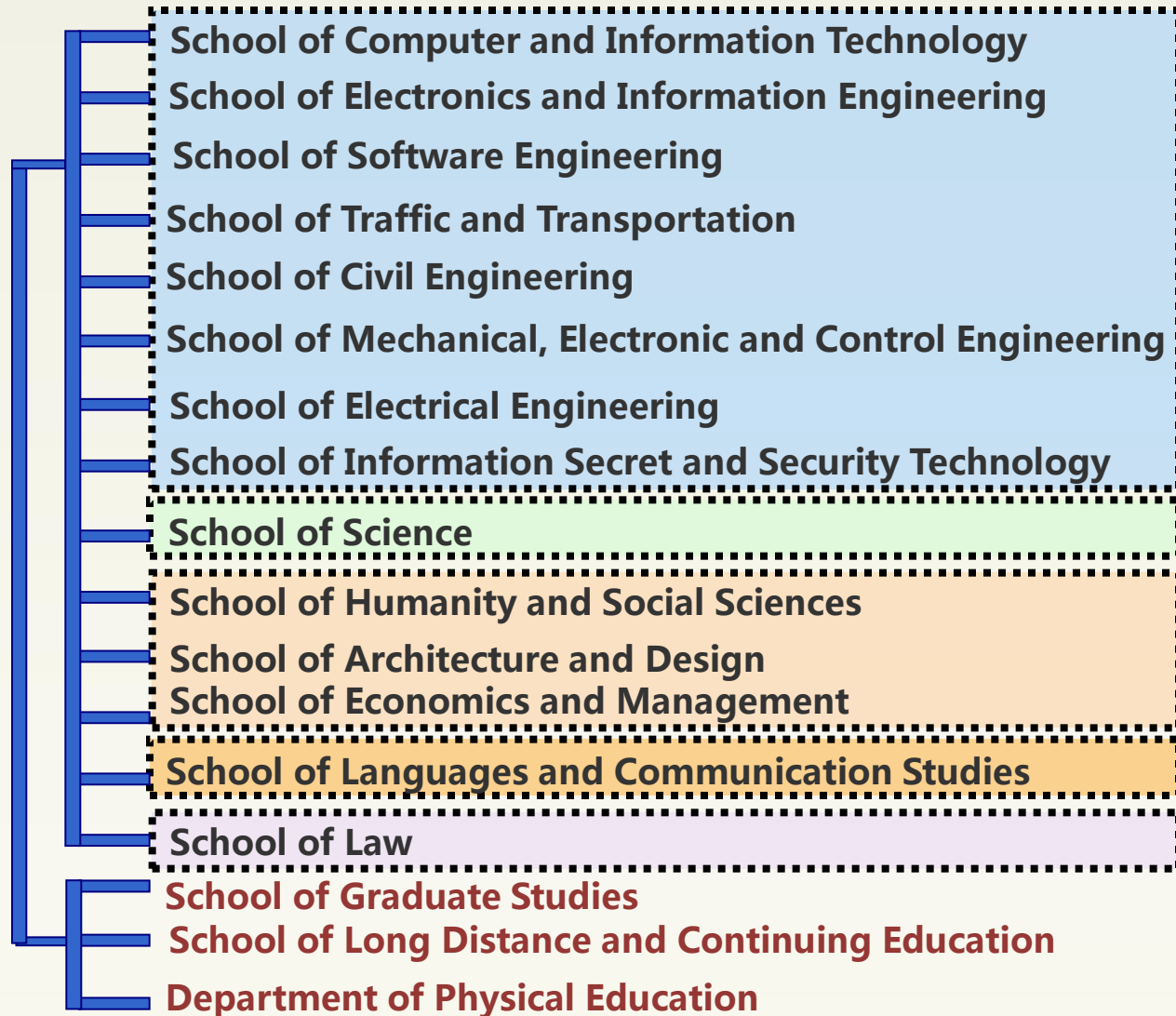


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3. Schools

**B
J
T
U**

14+3



Introduction - BJTU Today



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3. Students

Full-time students number reaching **25,985**

→ Ph.D. Candidates **2520**

→ Master Students **7690**

→ Undergraduates **14,009**

→ International Students **1766**



4. Faculty

Faculty and Staff **2933**

Full-time faculty **1768**

→ Overseas faculty 277

4 Academicians of Chinese Academy of Science

8 Academicians of Chinese Academy of Engineering

Introduction - Education

BJTU admits top 5% talented students nationwide

Educational Goals

Beijing Jiaotong University is committed to cultivate talents with:

1. Solid foundation of professional knowledge
2. Interdisciplinary background with international vision
3. Engineering and humanistic quality with innovation ability

Alumni

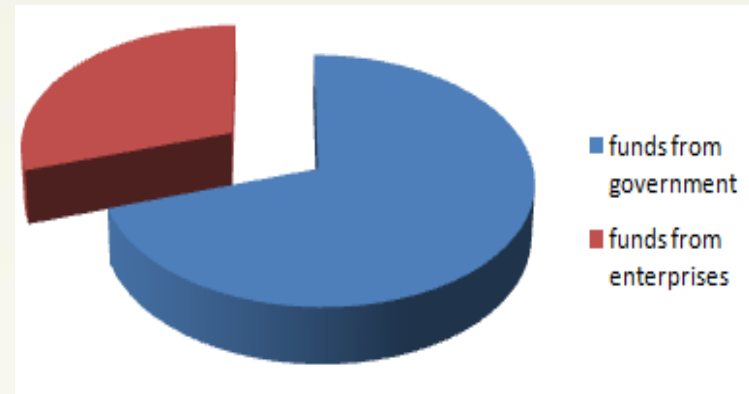
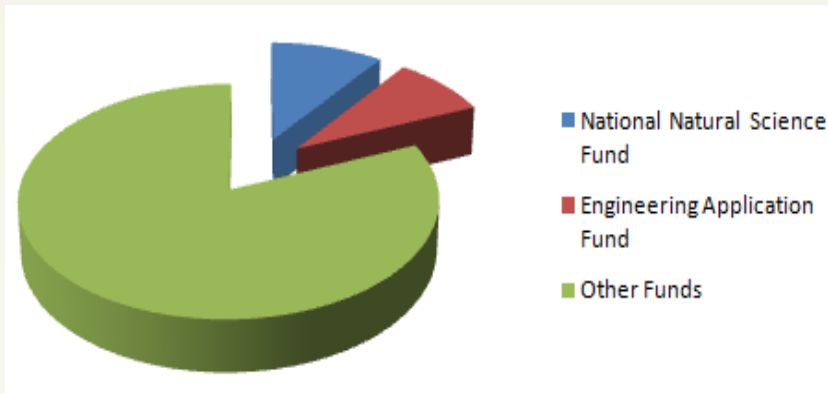
1. Over 1/3 senior officers and engineers in local railway administrations
2. Employment rate: 98%; graduates are very popular among employers
3. Distinguished alumni: Mr. LI Hejun, graduate of 1986, CEO of Hanergy Holding Group, ranked Top 1 in the Mainland China Rich List of Hurun Report 2015



Introduction-Research



In 2014, the research contract funds approached 810 million yuan, among which 70% are from the government.



The per capita research fund ranks top 20% in all universities.



Introduction-Research

Fundamental Research

- Research funds reaching 3.58 billion RMB from 2010 to 2014
- National Key Laboratory: State Key Lab of Rail Traffic Control & Safety
- National Engineering Laboratories: National Engineering Laboratory for Next Generation Internet, Laboratory of High-speed Railway System Experiment

Applied Research

- National Engineering Research Center: Center for Rail Transport Operational Control System
- National Accredited Laboratories: EMC Laboratory, Structure Strength Test Laboratory, Network Management Laboratory, Civil Engineering Test Laboratory

Technology Transfer

- National University Science Park
- Center for Beijing Urban Traffic and Technology Transfer

International Cooperation -Global Partners

Strong ties with: more than 200 renowned universities, institutions and high-tech companies from 37 countries and regions all over the world

Student mobility with:
More than 90 international universities



International Cooperation - Confucius Institutes

Confucius Institutes

Europe



University of Leuven, Belgium
比利时鲁汶大学

North America



Texas Southern University, US
美国德克萨斯南方大学

South America



Campinas University, Brazil
巴西坎皮纳斯大学



2013 The Establishment Ceremony
of Texas Southern University
Confucius Institute



2014 President XI Jinping
witnessed the agreement signing by
Hanban and Campinas University



2014 The Student Art Troupe visited the
U.S. universities and held a performance
tour supported by *Hanban*

International Cooperation - International Association



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- Sino-EU Engineering Education Platform (SEEEP)

中欧工程教育联盟

(中方18所高校, 欧方13所高校)

- Affiliated member of the International Union of Railways (UIC)

国际铁路联盟

- Founding Member of Alliance of Chinese and European Business Schools (ACE) under the patronage of the EFMD

中欧商校联盟创始院校



中 欧 商 校 联 盟



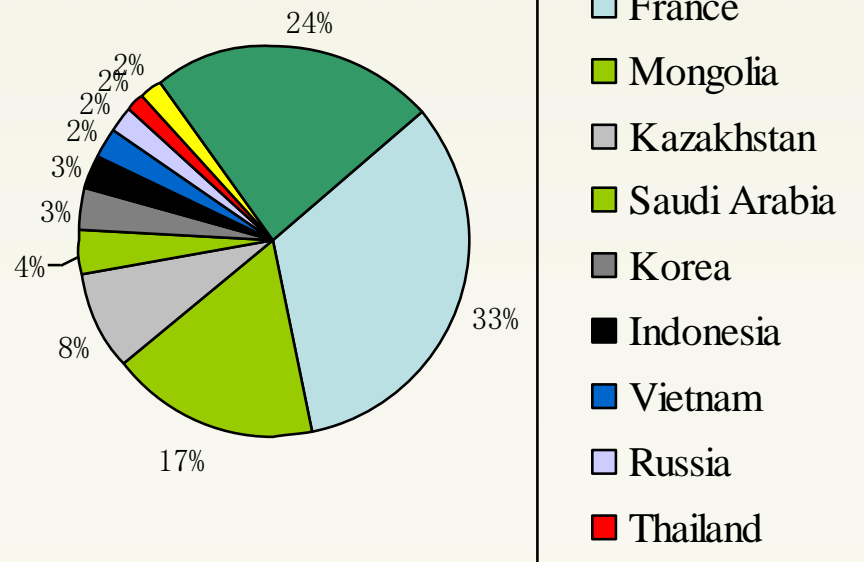
International Cooperation - Cultural Exchange



北京交通大学
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2010-2014 received **5380** international scholars.

The number of international students exceeds **1000** annually on average, from more than **100 countries**.



2014 International Students



Studying at BJTU



The 5th International Culture Festival—
Asian Style



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Master Program of Logistics Engineering in English Medium Beijing Jiaotong University

Program Overview

The master program of logistics engineering of BJTU is committed to cultivate talents with:

1. Initiated in 2004 and has strong competitiveness in China
2. Evaluated as China's No. 1 in this academic field
3. Two years' M.E. program



Master Program of Civil Engineering in English Medium Beijing Jiaotong University

Program Overview

The master program of civil engineering of BJTU is committed to cultivate talents with:

1. A National Characteristic Specialty and over 50 years history
2. Supported by 2 National Key Disciplines, Road and Railway Engineering, Bridge and Tunnel Engineering.
3. Make use of the advantages and experience of itself and China in the field of civil engineering



Master Program of Computer Technology in English Medium Beijing Jiaotong University

Program Overview

The master program of Computer Technology of BJTU is committed to cultivate talents with:

1. Created nearly 40 years ago
2. Supported by 2 National Key Disciplines, Signal and Information Processing, Pattern Recognition and Intelligent Systems.

Courses offered in Computer Science



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Computer Networking- A Top-Down Approach

- The course mainly discuss the network theory, including 7 layers of OSI, network security and network management. The content sequence is from top to down, namely, from application layer to physics layer.

Image Compression and Applications

- This course provides an introduction to basic concepts and methodologies for image compression and image processing, and to develop a foundation that can be used as the basis for further study and research in this field.

Teaching program of Computer Graphics

- Computer Graphics is a subject which studies related theories and algorithms about how to represent, compute, process and display graphics by computers.

Introduction to Machine Learning

The interdisciplinary Machine Learning conducts researches on how computer simulate or achieve human learning behavior, to gain new knowledge and skill.

Natural Language Processing

Case study of information search and capture, machine translation, introduce basic subjects, main theory and methods of natural language processing, students will understand the methods and know-how of language processing.



| Course titles | Course Description |
|---|---|
| Electromagnetic Field and Magnetic Waves | Enables students to grasp the system of electromagnetic fields and electromagnetic waves, master the analysis of static and time-varying fields |
| Circuits Analysis | Focuses on theories and methods for analysis of lumped parameter and linear circuits. |
| Analog Electronics Technology | Introduces the basic concepts, analysis and synthesis methods of analog electronic technology from the engineering technology, systems integration, and research methods. |
| Software-Defined Radio | Focuses on the fundamental concepts, principles and broad applications of software (cognitive) radio technologies. |
| Digital Electronics Technology | Introduces the basic and synthesis method of digital electronic technology from three aspects - engineering technology, systems integration and research method. |
| Digital Signal Processing | Addresses the representation, analysis, and design of discrete time signals and systems. |
| Principles of Communication Systems | Combines professional mathematic knowledge of Advanced Mathematics, Probability and Linear Algebra with analytical method of signal linear system |
| Principles and Interface Technology of Microcomputer | Covers the structure and operational principle of computer system interrupt technology, DMA technology, and method of assembly language design. |

Electronic and Information Engineering

| Course titles | Course Description |
|---|---|
| Fundamentals of Wireless Communications | Introduces basic concepts, key techniques and traditional systems of wireless communications |
| Signals and Systems | Builds a solid basis of principles and methods of signals and systems, learn analysis methods of time and transform domain |
| Fundamentals of Information Theory | Integrates the analytic methods of the random process with the theory of the fundamentals of information theory |
| Fundamentals of Wireless Communications | Covers introduction to wireless communications, propagation mechanisms of wireless channels, description and characterization of narrowband and wideband channels |
| Computer Networks | Teaches students satisfies the requirements for computer network application research, computer network deployment |
| Fundamentals of Railway Signaling | Aims to enable students to master fundamental concepts and methods of Fail-safe, traction calculation, train control and railway capacity assessment |
| Fundamentals of Communication Networks | Introduces the performance evaluation of communication networks and its design at different time scale based on queue theory and optimal theory |
| Electromagnetic Field and Magnetic Waves | Grasps the theoretical system of electromagnetic fields and electromagnetic waves, master the analysis and calculation of static and time-varying fields |

Mechatronics Engineering Program



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| | |
|---|--|
| Engineering Materials | Introduction to engineering materials: definition and description of properties; influence of material properties on engineering |
| Introduction to Circuits and Devices | Aims to equip students with an understanding of the behaviour of basic electrical devices and circuits as used in electrical, computer and telecommunication engineering |
| Engineering Mechanics | Includes analysis of plane stress and plane strain, combined stresses. Introductory yield criteria for metals, and anelastic behaviour of non metals |
| Engineering Design and Innovation | Design and Build Competition requiring team work, concept designs and final solution |
| Circuits and Systems | Covers dependent sources; circuit analysis techniques; simple operational amplifiers circuit analysis |
| Digital Hardware | Includes: combinational logic, simplification of logic expressions, Karnaugh maps; sequential logic, flip-flops, registers, clock, timing |
| Foundation of Physics B | An introduction to the physical laws of electricity and magnetism, leading to an explanation of the generation of electromagnetic waves and some basic ideas |

Mechatronics Engineering Program



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English courses offered by international class in 2016

- Heat Transfer** ○ The main coverage is the heating and cooling of mechanical objects and the emphasis is Heat Conduction Principle
- Digital Control Systems (B)** ○ Helps students understand and master the basic concept and principle and basic analysis method of digital (sampling) control technology
- Mechatronics Technology** ○ Covers fundamentals of mechatronics design, with emphasis on product design and fabrication; Examples of mechanical systems utilizing sensors and actuator technologies
- Finite Element Method(FEM) and Applications** ○ Ensures the students master the basic theory of finite element and gain the ability of solving basic problems derivation of the finite element concept and finite element scheme
- Robotics** ○ Aims to teach students the knowledge of industrial robot structure and components, kinematics and dynamics, robot control and sensing technology, robot design principles and methods
- Hydraulic and Pneumatic Technology** ○ Discusses the principle and characteristics of the hydraulic and pneumatic components, and then researches how to use theses components to form circuits and systems in classroom and laboratory.

Admission Requirement

Foreign citizen

- He/she must have got the foreign passport for at least 4 years
- The time living in the passport issuing country must be more than 2 years

Applicants whose native language is not English

- Proof of education completed in the English language
- Minimum TOEFL score of 68 (IBT) within the past 2 years
- Minimum IELTS score of 5.5 within the past 2 years
- Passed the English language test of BJTU

General requirement

- Applicant must be in good health and abide to the laws and regulations
- Undergraduate students can select the courses offered in the Master program if credits will be transferred by INSA Lyon

Contact

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Website: <http://cie.bjtu.edu.cn>

Chinese Language Programs

Program Overview

Primary, intermediate and advanced Chinese language classes are available for students with different Chinese proficiency.

Curriculum of Chinese Language Program

| Category | Hours per Week | Weeks per Semester | Main Courses |
|-----------------|----------------|--------------------|--|
| Long-term Class | 22 | 16 | Comprehensive, Speaking, Reading and Writing, Listening and Business Chinese |
| Summer Class | 22 | 4 weeks in July | Comprehensive, Review |

Chinese Language Programs

Application and Admission

The above dates are for reference only. In case of discrepancy, the actual time on admission notices shall prevail.

1. Language Learning from fall: Application deadline is July 15; entry date September 1
2. Language Learning from spring: Application deadline is January 15; entry date March 1

Contact

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THANK YOU