Welcome Message from the President

Welcome to Beijing University of Chemical Technology!



Beijing University of Chemical Technology (BUCT) is affiliated to the Ministry of Education. As one of China's key institutions of higher learning, BUCT has developed from an institution of technological specialties into a comprehensive university. Science and Engineering have been retained as the core disciplines with the addition of management, economics, law, arts, education, philosophy and medicine in order to create a comprehensive portfolio.

By fully exerting its academic strengths in carrying out the government's strategy of reviving China through science and education, BUCT is striving to become a multidisciplinary research university while retaining the merits of its original foundations. Our goal is to be one of the leading institutions in China, as well as an influential university worldwide.

We are advancing our tradition of excellence in education through high quality programs in teaching, research, and service to society. With our eye on the future, we are successfully responding to the new challenges of a global, interdependent, multicultural, and technologically advanced society.

All the teachers and students of BUCT will continue carrying out the university motto "To be ambitious, virtuous, profoundly learned and to explore the magic world of chemical technology and to serve the people" and keeping to its spirit of "To be united, diligent, practical, learned and innovative" so as to make every endeavor to develop BUCT into an internationally influential high-level multidisciplinary research university and one of the most distinguished universities in China.

I invite you all to get to know BUCT through these pages, and welcome you to join our university or experience the excellence that BUCT offers by establishing a partnership with us. I look forward to the opportunity to meet and speak with you personally in the near future. Again, welcome!

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Professor TAN Tianwei President Beijing University of Chemical Technology



University Highlight

- A key university directly affiliated to the Ministry of Education;
- A key university of the National Project 211;
- A key university of the National Innovation Platform for Competitive Disciplines;
- One of the top 30 universities in terms of the major indicators of scientific research since 2001;
- Has been awarded 20 national prizes of science and technology since 2001;
- Has National Chemistry and Physics Teaching Bases for Basic Engineering Courses as well as a National Education Base for University Student's Cultural Qualifications;
- Has a graduate employment rate which has always remained among the top rank of Chinese universities.

Beijing University of Chemical Technology (hereinafter BUCT) is a state key university directly under the Ministry of Education (MOE) and a key university of the National Project 211 and a National Innovation Platform for Competitive Disciplines. In the last decade, it has become a multidisciplinary university with science and engineering retained as the core disciplines with the addition of management, economics, law, arts, education, philosophy and medicine to the core curriculum.

BUCT occupies an area of 740,000 square meters with a total building area of nearly 600,000 square meters. It possesses modern libraries, teaching buildings, sports fields, student activity centers and state-of-the-art laboratories for teaching and scientific research. It consists of 12 colleges, offering five post-doctoral stations, five primary discipline doctoral programs, 28 subordinate discipline doctoral programs, 17 primary discipline master's programs, 88 subordinate discipline master's programs and 43 undergraduate majors. Staffed by 1,800 outstanding faculty and researchers, BUCT has 650 full professors and associate professors, including nine academicians of the Chinese Academy of Science and Chinese Academy of Engineering.

Scientific research at BUCT is developing rapidly. To date, the university has established two statelevel key laboratories, two state-level laboratories, one national engineering laboratory, six provincial and ministry-level key laboratories, one school-level key laboratory, one state-level research institute for engineering technology, nine provincial and ministrylevel research centers for engineering technology, six school-level cross-discipline research centers, 22 school-level research centers, three school-level research bases, 25 school-level institutes, and nearly 100 teaching and research laboratories.



Brief Introduction











BUCT has made rapid advances in its capability to undertake major scientific research projects and solve major problems related to national economic and social development. Funding for scientific and technological research has reached a historic record, and per capita funding for scientific research ranks first nationally. Since 2001, 20 research projects have received the National Science and Technology Award. There are four Ministry of Education Changjiang Scholar Innovation Teams, one of highest in universities nationwide. In 2010, BUCT obtained 4.5 billion RMB of science and technology funding, one National Science and Technology Award and seven provincial and ministerial level scientific and technological awards, whilst 154 patents were granted and 2125 papers were published.

BUCT also lays special stress on the commercialization of its scientific and technological achievements. It has been ranked as a "State Collegiate Science Park" by the Ministry of Science and Technology and the Ministry of Education and has established BUCT Enterprise Group with more than 20 affiliated industrial entities, such as new technical companies and a fine chemical plant, that are closely linked with the teaching and scientific research.

BUCT pays great attention to the international exchange and communication of academic studies, culture and education, as well as implementing Chinese-foreign cooperation in the management of the university. BUCT has established academic cooperation with more than 70 universities in the UK, USA, France, Germany, Australia, South Korea, Japan and elsewhere. Numerous foreign scholars and well-known professors have been invited to give lectures and carry out cooperative research. In addition, BUCT has successfully held many international academic conferences and thus enjoys a high worldwide reputation.

The current student body of the university is 27,000, including 5,300 doctoral and graduate students and 13,600 undergraduate students. In addition, there are more than 300 international students. Since its founding it has trained nearly 100,000 talented personnel for the country. It has established a careers guidance service and ranks first nationwide in terms of initial graduate employment rate.

By its concrete actions, BUCT is exerting itself to the fullest extent in order to build an internationally influential high-level multidisciplinary research university which is also a first class distinguished university in China.

UCT has 1,800 teachers and staff, including 1,065 full time teachers among **D** which there are 650 professors and associate professors, nine academicians of the Chinese Academy of Sciences and Chinese Academy of Engineering, two academics introduced through the "Recruitment Program of Global Experts", one "Excellent Technical Talent", eight professors specially employed through the Cheung Kong Scholars Program of MOE, one Chair Professor, three Lead Investigators under the "National 973" Program, nine recipients of the National Science Fund for Distinguished Young Scholars as well as 47 staff supported under the New Century Excellent Talent Program of MOE.

Through systematic innovation, BUCT continuously improves its professional teaching team, creating a teaching and research team centered on prestigious specialist leaders. The team is focused on middle-aged and young scholars, features extensive disciplinary coverage, and has a reasonable balance of both age and professional knowledge.

Academicians





Duan Xue

Gao Jinji

Tan Tianwei





Mao Bingquan

Wang Yuming







Yuan Ouan



Wang Wenxing



Sun Youxian



Liu Hongliang

UCT attaches great importance to international academic and cultural educational exchanges and actively develops cooperative projects with foreign partners. Since 1996 it has signed cooperation agreements with 70 foreign universities and large multinational companies from 15 countries and regions. Many companies, such as DuPont, Dow, BASF and Bayer, provide scholarships for BUCT students.

BUCT organizes many international academic conferences. Recent examples include the International Seminar on Integrated Molecular and Materials Engineering (ISIMME), the International Conference on Process Intensification for Sustainable Chemical Industries (ICPI), the International Symposium on Mixing in Industrial Processes (ISMIP), and the International Conference on Biomass Energy Technologies (CIBT), which have all contributed to the promotion of international academic exchanges in the university. Furthermore, BUCT has actively encouraged young researchers to study abroad and conduct academic exchanges so as to promote the rapid development of new subjects.

The introduction of expertise and talents from foreign countries is one of BUCT's key aims. In 2011, two "Introduction of Innovative Talents Project", one "Overseas Teacher Project", two "Introduction of Overseas Highlevel Experts Project" and one "Characteristic Project" were implemented and achieved good results. Meanwhile, 20 key programs as well as 100 ordinary programs were supported by BUCT. In recent years, 11 foreign experts working at the university have been honored with the Friendship Award by the Chinese government and been received by national leaders.







In order to produce students with extensive perspectives and international competitiveness, BUCT cooperates with foreign universities and colleges in introducing student exchange programs and joint educational programs, as well as in sending students for graduate programs in foreign countries, and offering students opportunities of studying in foreign educational institutions for both long and short periods. At present, it has carried out student exchange programs and postgraduate programs with around 30 overseas universities in countries including the UK, USA, France, Germany, Australia, South Korea, and Japan. The BUCT-Cambridge Summer School and BUCT-Sheffield Summer School have been successfully held in each of the last two years.

Since 2000, BUCT has achieved great progress in its educational program for foreign students. During this time, more than 2,000 foreign students from the United States, France, Australia, Japan, Korea and many other countries have enlisted in our language study programs, undergraduate, graduate and doctoral programs. In 2011, the number of foreign students in degree programs including undergraduate, graduate and doctoral studies accounted for more than 35% of the total foreign students in the university. The growth in the number of international students not only greatly promotes the educational level of the university, but also contributes to the merging of Chinese and western cultures and to the creation of a multi-cultural campus life.

















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International Exchanges and Cooperation









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Scientific Research



The development of scientific and technological research at BUCT has been rapid and outstanding. BUCT has a large number of scientific research institutes including two state-level key laboratories, two state-level laboratories, one national engineering laboratory, six provincial and ministrylevel key laboratories, one school-level key laboratory, one state-level research institute for engineering technology, nine provincial and ministry-level research centers for engineering technology, six school-level cross-discipline research centers, 22 school-level research centers, three school-level research bases, 25 school-level institutes, and nearly 100 teaching and research laboratories.

From 2006 to 2011, BUCT undertook over 4,000 scientific projects with a total expenditure of 2.041 billion RMB. By the end of 2011, BUCT had obtained 40 statelevel prizes for scientific progress, 260 provincial and ministry-level scientific prizes, along with 1939 patent applications and 780 patents having been granted. More than 2400 journal articles have been published which have been cited over 8,400 times in SCI publications. Statistics from MOE shows that the scientific expenditure per person in BUCT ranked 10th among all Chinese universities in 2010. A study by the Guangdong Institute of Management Science showed that BUCT's scientific performance per person over all the teaching staff and students ranked first among the Project 211 universities in 2010.

BUCT emphasizes its hi-tech academic achievements and efforts in industrialization, and its Science Park has been authorized as a National College Science Park. There are more than 20 scientific and technological industrial entities with distinct BUCT characteristics which are closely related to both teaching and research in the university. They have produced a series of technologies and products in such fields as biochemical engineering, consumer products for daily use, fine chemicals, and new chemical materials. Apart from the high-tech industrial bases in Miyun County and Changping District, in recent years BUCT has given special focus to the construction of scientific research institutions in the Pearl River Delta, Yangtze River Delta and the Bohai Sea Rim Area. BUCT has also set up the Changzhou Institute of Advanced Materials in Jiangsu and the Xiamen Center for Industrial Biological Technology Transfer in Fujian, both of which have had a good performance.



This university attaches high importance to the industrialization of the high technology achievements of the academic staff. It follows the operating principle of industrializing scientific and technological achievements, and has built up several high-tech based industries with BUCT characteristics in such fields as the biochemical industry, daily-use chemicals, the fine chemical industry and new materials. Because of this, a series of technologies and products have been developed in the high-tech industry base now located in the Industrial Development Zone in Miyun County in Beijing.

Key industrial enterprises of the university:

- of advanced new isolation techniques and industrial scale facilities.
- 3. Beijing Beihuada Keyi Fine Chemical Co., Ltd.: This organization is principally engaged in the production of fine chemical industry products as polyethylene wax, micronized wax, and nano titanium dioxide.
- gear-drive units.
- treatment and industrial chemical cleaning.
- development of mixing technology and design and production of mixing apparatus.
- 8. BUCT Science Park-Science and Technology Development Center: This is an independent legal enterprise of BUCT.



1. Beijing Huada Huaxin Sci-tech Co., Ltd.: One of the enterprises owned by the university, with a registered capital of RMB 45 million RMB, principally engaged in the development and production of daily-use chemical products.

2. Beijing Xinte Sci-tech Development Co.: This Company is principally engaged in the development and application

4. Beijing Huanfeng Chemical Machinery Experimental Factory: This factory is principally engaged in the manufacture of products such as rubber sulfuration testing instruments, mechanical sealing devices and mixture

5. Beijing Huaxin Tongda Cleansing Tech Co., Ltd.: This Company is principally engaged in industrial water

6. Beijing Beihua Liming Membrane Separation Technique Co., Ltd.: One of the enterprises owned by the university which is principally engaged in the research, development, and production of membrane filter materials.

7. Beijing Beihua Mixture Technology Facilities Co.: This Company is principally engaged in the research and

owned by Beijing Beihuada Investment Corp. It is the administrative body of the state-level university science park

Undergraduate Studies



85% of the public basic courses have been recognized as the best state-level and Beijing citylevel courses. Special emphasis has been given to the construction of undergraduate student teaching. BUCT hosts 3 state-level teaching bases including chemistry teaching base, physics teaching base and cultural quality education base for university students. Meanwhile BUCT has the State-level Demonstration Center for the Experiment Teaching of Chemistry and Chemical Engineering as well as six Beijing city-level Demonstration Centers for the Experiment Teaching of Higher Education Institutions, such as chemistry, physics, polymer science, principles of chemical engineering, electronic and electric engineering and machinery engineering. In addition, BUCT has established a state-level innovation pilot zone for talent cultivation mode – Talent Cultivation Base for Great Chemical Industry. In 2009, the teaching achievement – Build the System of Innovative Talents for Great Chemical Industry through Mutual Promotion of Production, Learning and Research made independently by the university - was awarded with the first prize of state-level teaching achievement.

UCT has about 13,600 undergraduate students in total D and eight institutes with 32 programs. Besides, it has two international classes and one pilot class in natural sciences. Four pilot classes in engineering have been established in accordance with excellent engineer plan. BUCT highly emphasizes the teaching of undergraduate students. BUCT is one of the first excellent high institutions that had passed "the Evaluation of the Teaching Work Level for Undergraduate Student" held by Ministry of Education (MOE) in 2004. Now BUCT has 8 state-level characteristic programs, 10 Beijing city-level characteristic programs, 5 state-level bilingual demonstration courses, 15 state-level best courses and 37 Beijing city-level best courses. BUCT also has 5 state-level excellent teachers and 15 Beijing city-level excellent teachers. At present, there are 5 state-level teaching teams and ten Beijing city-level excellent teaching teams in BUCT.



Bachelor's Degree

- Chemical Engineering and Technology
- Environmental Engineering
- Energy Chemical Engineering
- Polymer Materials and Engineering
- Materials Science and Engineering
- Biological Functional Materials
- Biological Engineering
- · Biological Technology
- Pharmaceutical Engineering
- Applied Chemistry
- Mathematics and Applied Mathematics
- Information and Computer Science
- · Electronic Science and Technology
- Safety Engineering
- Industry Design (Arts)
- Process Equipment and Controlling Engineering
- Mechanical Engineering and Automation
- Automation
- Testing and Controlling Technology and Instruments
- Computer Science and Technology
- Electronic Information Engineering
- Communication Engineering
- Information Management and Information System
- International Economy and Trade
- Business Management
- Accounting (International Accounting)
- Financial Management (Accounting and Finance)
- Logistics Management
- Law
- English
- · Public Utilities Administration
- Administrative Management
- Social Physical Education











Graduate Studies

Graduate school of BUCT has 5 first-level disciplines for doctoral degree granting, 28 second-level disciplines for doctoral degree granting, 20 first-level disciplines for master degree granting, 90 second-level disciplines for master degree granting and 5 centers for post-doctoral studies. As a result, with chemical engineering, material, chemistry and chemical machinery as the core, a discipline layout with distinctive features has come into being in our university, which is famous and influential both at home and abroad as well as characterized by the features



BUCT has created a strong academic atmosphere through constructing platforms, such as academic forums and master forums. Apart from that, we have set up some graduate innovation bases including 14 schoolenterprise cooperation fieldwork bases and over 30 Chinese-foreign cooperation training bases. Therefore, a diversified graduate training mode has come into being gradually, which gives equal focus to research and specialty degrees.













Master's Degree

- Chemical Engineering and Technology
- Environmental Science and Engineering
- Chemistry
- · Materials Science and Engineering
- Engineering Mechanics
- Mechanical Engineering
- Power Engineering and Engineering Thermophysics
- Safety Science and Engineering
- Control Science and Engineering
- Computer Science and Technology
- Software Engineering
- Management Science and Engineering
- Business Management
- Mathematics
- Physics
- Light Industry Technology and Engineering
- Food Science and Engineering
- Pharmacy
- Science of Law
- Research of Marxism in China Feature
- Psychology of Ideological and Political Education
- Public Management
- · Philosophy of Science and Technology





Doctor's Degree

- Chemical Engineering and Technology
- Environmental Engineering
- Chemistry
- Materials Science and Engineering
- Theory and Design of Mechanic
- Control Science and Engineering
- Power Engineering and Engineering Thermophysics

The College of Chemical Engineering consists of the Department of Chemical Engineering (DCE), the Department of Environmental Science and Engineering (DESE), the Department of Energy Engineering and the Research Institute of Chemical Engineering (RICE). There are 119 faculties and staffs in the college, including two academicians of the Chinese Academy of Engineering and the Chinese Academy of sciences, 42 professors and 44 associate professors. All of the full professors have been approved as supervisors of Ph. D. students.

Currently, 1110 undergraduate students, 800 graduate students and 97 Ph. D. students are enrolled in the college, majoring in chemical engineering and environmental engineering. There are also 8 postdoctoral research fellows.

Research Centers

- State Key Laboratory of Organic-Inorganic Composites
- State Key Laboratory of Chemical Resource Engineering
- Research Center of the Ministry of Education for High Gravity Eng. & Tech.
- Key Lab. for Nanomaterials, Ministry of Education
- Beijing Key Laboratory of Membrane Engineering Development
- Beijing Engineering Center for Environmental Control and Resources Utilization

Research Labs of RICE

- Molecular and Materials Simulation
- Physical Properties & Process Simulation
- Industrial Catalysis & Reactor
- Fluid Mixing & Reactor Engineering
- Mass Transfer & Separation Engineering
- Process Simulation & Optimization
- Fluid Dynamics & Heat/Mass Transfer
- Bio-vaste Utilization adn Bioenergy



(1) Chemical Process Intensification and Nanomaterials

- Reaction and separation intensification by high gravity engineering & technology
- Microreactor technology and applications
- Synthesis and applications of nanomaterials
- Nanodrugs

(2) Industrial Catalysis & Reactors

- Dynamic characteristics of reactors
- Forced reverse-flow fixed bed reactor
- Design and engineering of catalysts
- Optimization of reactors
- Green chemistry
- Clean production processes

(3) Fluid Dynamics & Reactor Engineering

- Single phase, multiphase, high viscosity and non-Newtonian fluid mixing in stirred reactors
- Multi-scale CFD simulation of fluid flow, heat transfer, mass transfer and chemical reaction in stirred reactors
- Optimization and industrial applications of stirred reactors
- Development of high efficiency new mixing devices
- Mechanical aspects of agitated reactors

(4) Membrane Separation

- Liquid membranes for waste water treatment and protein separation
- Membrane absorption/membrane extraction/ Membrane Distillation process
- MF, UF and NF processes
- Air filter based on membrane/Green House Gas capture and separation
- Hollow fiber renewal liquid membrane and non-equilibrium mass transfer
- Heavy metal ion concentration and water pollution control
- Membrane Reactor

(5) Molecular and Materials Simulation

- Experimental measurements of adsorption and diffusion in catalysts, adsorbents and inorganic membrane materials
- Structure-property relationship of nano-porous materials by molecular simulation, including Monte Carlo and molecular dynamics simualtions
- Experiment and theory of nanoparticle/copolymer nanocomposite
- Experimental and theoretical studies of metal cluster catalysts
- Quantum mechanics/molecular mechanics (QM/MM) method for the development of force fields
- Self-assembly of surfactant and diblock copolymer



College of Chemical Engineering



Main Research Projects

(b) Physical Properties & Process Simulation
• Molecular simulation of fluids confined in nano-
materials
 Computational study of polymer nano-composites
Thermodynamics of complex systems
Fabrication of micro- and nano-powders
(7) Mass Transfer & Separation Engineering
New types of distillation trays and packings
 Computer-controlled micro-pilot batch and continuous
distillation columns
Distillation technology and separation processes
Mass transfer in SCF extraction columns
• SCF extraction of fine chemicals and Chinese
medicines
Reaction-extraction coupling process
(8) Process Simulation and Optimization
• Simulator for training & designing in chemical
processes
• On-line optimization and control of chemical
processes
Process simulation and optimization
(9) Environmental Science & Engineering
Renewable energy and Bioenergy
Trace pollutant monitoring and control
Water pollution prevention and control
Air pollution prevention and control
Solid Waste management engineering
• Environmental management and planning

(10)Energy Engineering

- Coal chemical engineering
- Non-petroleum based chemicals

College of Materials Science and Engineering



Departments and Divisions

Department of Polymer Science

- Polymer chemistry
- Polymer physics

Department of Polymer Engineering

- Structure and property of polymers
- Polymer processing and mould design
- Rubber and plastic engineering
- Polymerization engineering

Department of Functional Organic Materials

- Emulsion polymerization
- Information materials
- Photo-sensitive polymers
- Polymer blends and alloys
- Polymeric membrane
- · Controlled self-assembly and functionalization

Department of Composite Materials

- Ceramic matrix composites
- Carbon fiber reinforced composites
- Nanocomposites

Department of Biomaterials

- Gene/drug delivery carriers
- Gelatin
- Bioelastomers
- Degradable polymers

Department of Carbon and Inorganic Materials

- Advanced carbon materials
- Functional ceramics
- Electrochemical process and technology

The College of Materials Science and Engineering (CMSE) was created in 1996 by combining the research divisions in metallurgy, ceramics, polymers and composites. Particularly, the division of Polymer Science and Engineering was a leader in polymer education and pioneering polymer research in China. Currently, the College hosts a national key discipline in materials science and a national engineering research center for carbon fibers. The College has 160 faculty and staff including two academicians of the Chinese Academy of Engineering and the Chinese Academy of sciences, 55 professors and 52 associate professors. It runs a broad range of undergraduate, postgraduate and research programs in Materials Science & Engineering, Materials Physics and Chemistry, Macromolecular Science and Applied Chemistry.



Department of Metal Surface Engineering

- · Mechanisms of corrosion
- Failure analysis of metals
- · Modification of metallic surfaces
- Chemistry and physics of metallic surfaces

Department of Modern Macromolecular Engineering

- · Controlled/living cationic polymerization
- Active anionic polymerization
- Controlled/active radical polymerization
- Coordination polymerization
- Controllable surface grafting polymerization

National Engineering Research Center for Carbon Fibers

- High modulus and high strength carbon fibers
- C/C composites
- Carbon nanomaterials

Center for Advanced Elastomer Materials

- High-performance elastomer materials
- Physical chemistry of elastomers
- Processing and molding
- · Polymer reactive processing

Center for Material Analysis and Testing

Main Research Fields

(1) Polymer Chemistry

- Living anionic polymerization
- Controlled/living cationic polymerization
- Controlled/living radical polymerization
- Emulsion polymerization
- · Polymerization on polymer surfaces
- Photopolymerization
- Living/controlled coordination polymerization
- Polycondensation
- Design and synthesis of polymers

(2) Physical Chemistry of Polymers

- Rheology
- Polymer structures and crystallization
- Conformation and statistical analysis of polymers
- Chemical and physical modification
- Helical polymers

(3) Polymer Processing and Modification

- High-performance elastomer materials
- · High-performance synthetic fibers
- · High strength and high modulus carbon fibers
- High-performance plastics
- Surfaces and interfaces of materials
- Polymer blends and alloys
- Processing and molding
- Polymer reactive processing
- C/C composites
- · Fire-retardant polymeric materials
- Crosslinking reaction
- Polymer Recycling





College of Materials Science and Engineering



(4) Functional Materials

- · Electrochemical process and technology for materials
- Carbon fiber reinforced composites
- Nanocomposites
- Nano- and functional carbon materials
- Photosensitive polymers and information materials
- Stimulate-responsive micro-gels
- Biomaterials
- Polymer membranes
- Hybrid functional polymeric materials
- Functional ceramics
- Materials for electronics
- Fluorescent Polymers
- · Controlled self-assembly and functionalization
- Chiral materials
- Inorganic materials
- Functional nanocomposites

(5) Fine Chemicals

- Coatings
- Flocculants
- Adhesives, sealant and matrix resin
- · Industrial water treatment and wastewater treatment

(6) Metallic Surface Science and Engineering

- Surface modification and coatings
- · Corrosion mechanisms and corrosion control technology
- Corrosion electrochemistry
- Corrosion evaluation and failure analysis
- Anti-scale

College of Life Science and Technology







The College of Life Science and L Technology (CLST) was inaugurated on 25 Dec. 2003. It is a remarkable progress that Beijing University of Chemical Technology (BUCT) has made in its way of becoming a comprehensive university.

CLST offers Bachelor's, Master's and PhD programs. There are currently 47 faculties, including one academician of the Chinese Academy of Engineering, 13 professors and more than 18 associate professors and lecturers. In the recent 5 years, the faculty has received 94 governmental research grants with more than 40 million RMB. Many remarkable awards have been conferred to the faculty, 2 faculty members were awarded the Cheung Kong Scholar of Ministry of Education, 1 faculty member was funded by the China National Funds for Distinguished Young Scientists, and 1 faculty member was selected as a member of China Academy of Engineering.

Departments

- · Department of Biotechnology
- Department of Bioengineering
- Department of Pharmaceutical Engineering

Research Institutions

- Key Laboratory of Bio-process of Beijing (KLBB)
- Bio-experiment Teaching Center (a biochemical laboratory and a microbiology laboratory)
- Professional Laboratory
- Innovative Laboratory
- 4 Practice Bases



Main Research Fields

(1) Biobased Chemicals

- Biobased chemicals from renewable biomass
- Ethylene production from ethanol
- · Acrylic acid manufacturing from genetically engineered microorganisms
- · Lactic acid fermentation from low grade biomass
- Biobased 1,3-propanediol, fumaric acid and hyaluronic acid production

(2) Bio-catalysis

- · Process optimization of microbial fermentation
- Lipase catalysis
- Fermentation and application of functional macromolecules
- · Genetic engineering of microorganisms

(3) **Bio-separation**

- Molecular imprinting and separation technology
- Preparative chromatography
- Separation of active ingredients from natural products

(4) **Biofuel**

- · High-efficiency utilization of biomass
- Environmentally friendly biomaterials
- Biodiesel, Bioethanol and biogas production from renewable resources or low grade biomass

(5) Biochemical Engineering

- · Bioreactor design and engineering
- · Photo-bioreactor
- Sewage treatment
- Bio-membrane engineering
- · Industrial biotechnology



College of Life Science and Technology



(6) Biological Sciences

- RNA Interference
- Effect of microRNA dysfunction in tumorigenesis and prognosis
- Role of microRNA in stem cell differentiation and proliferation
- Employment of microRNA profiling in early cancer diagnosis
- Synthesis of lipid-based siRNA carriers
- Development of RNAi-based cancer therapy
- High-throughput screening and identification of cancer biomarkers
- Single nucleotide polymorphism
- Role of non-coding RNA in cancer chemotherapy
- Personalized medicine in early diagnosis of cancers and survival prediction

(7) Pharmaceutical Engineering

- Rational and novel drug design
- Development of novel assay techniques for discovering, modifying and designing drug substances and excipients
- Processes optimization in manufacturing of drug intermediates and products
- Development of microfluidic devices and instruments that facilitate the making, handling, and quality control in drug manufacturing processes

(8) Pharmaceutical Synthesis

- Interaction of small molecules and macromolecules
- Synthesis and biological evaluations of biomolecules
- Preparation and evaluation of novel gene carriers
- Research and development of novel pharmaceutical compounds
- Synthesis of aminoglycoside antibiotics
- Synthesis of β-receptor antagonists

The College of Science covers the following three disciplines: mathematics, physics and chemistry. There are ten . departments, eleven research institutions and an analytical testing center in the College. The State Key Laboratory of Chemical Resource Engineering is also housed in the College.

Departments

- Department of Mathematics
- Department of Applied Mathematics
- Department of Information and Computational Science
- Department of Applied Physics
- Department of Electronic Science
- Department of Inorganic Chemistry
- Department of Organic Chemistry
- Department of Physical Chemistry
- Department of Analytical Chemistry
- Department of Applied Chemistry

The College offers doctoral degrees, I master's degrees and bachelor degrees in and chemistry.

There are 182 staff members including one academician of the Chinese Academy About 1380 undergraduates, 400 graduate students and 46 Ph.D students are enrolled at the present time.

mathematics, physics and chemistry to all advanced courses to students specializing in mathematics, chemistry or physics.

Research Institutions

- State Key Laboratory of Chemical Resource Engineering
- · National Laboratory on the Fundamental Research of New
- Dangerous Chemicals Assessment and Accident Appraisal • Institute of Applied Chemistry
- Institute of Modern Catalysis
- Institute of Plant Chemistry Physics
- Institute of Industrial Chemistry
- Institute of Modern Medicine
- Institute of Computational Chemistry
- Institute of Energy Chemistry
- Institute of Electrochemistry
- Institute of Standard Substance





Main Research Fields

Mathematics

- Singularity theory and its applications
- Partial differential equations and their applications
- Numerical solutions for PDEs and mathematical problems in engineering
- Wavelet analysis and geometric computation

- Probability and statistics

Applied Physics

- Functional gradient polymer materials, low dimension physics, conduct polymer materials
- Modern testing technology

Electronic Science

Inorganic Chemistry

- Intercalation chemistry

Organic Chemistry

- Medicinal oragnic chemistry
- Organometallic chemistry
- Organic functional materials







- Laser technology, laser spectroscopy, optoelectronic materials and devices,
- Stimulation and design on structures and properties of materials





The former Department of Mechanical Engineering of BUCT became College of Mechanical and Electrical L Engineering in 1996 when the university broadened its teaching and research field. There are currently over 131 faculties, including two academicians of the Chinese Academy of Engineering, 19 professors and more than 48 associate professors. The college has a nation-wide reputation for research and design in the fields of safety engineering in chemical industry, machinery of chemical process, as well as polymer processing machinery. There are six disciplines authorized to confer Doctoral degrees including engineering thermo-physics, thermoenergy engineering, power machinery and engineering, fluid machinery and engineering, refrigeration and cryogenic engineering and chemical process machinery. There are three disciplines authorized to confer Masters degrees, including engineering mechanics, mechanical engineering, as well as power engineering and engineering thermo-dynamics. And there are four undergraduate majors (Process Machinery and Control Engineering, Mechanical Engineering and Automation, Security in Engineering, and Industrial Design).

Departments or Divisions

- Division of Foundation of Mechanics, including Teaching and Research Sections of Mechanical drawing, Mechanical Design, Mechanical Manufacture, as well as Engineering Mechanics;
- Department of Process Equipment and Control, including section of Process Machinery and section of Security Engineering;
- · Department of Mechanical Process and Automation, including sections of Polymer Processing Machinery, Mechanical and Electronic Engineering, as well as Micro and Nano Fabrication.
- Department of Industrial Design, including product modeling design, design for exhibitions and demonstration and vision delivery design

Research Organizations

- · Beijing Key Lab of Health Monitoring and Self-healing of High Grade Equipment
- Engineering Research Center of Safety in Chemical Industry, Ministry of Education
- Engineering Research Center of Polymer Processing Equipment, Ministry of Education
- Research Center for Equipment Diagnosis Engineering;
- Research Center for Security in Engineering;
- Institute of Plastics Machinery & Engineering;
- Design and Research Institute for Chemical process machinery;
- Research Center for Computer Aided Mechanical Engineering (CAE);
- Research Institute for Rubber/Plastic Processing Machinery;
- Engineering Center for Chemical Equipment Technology







Main Research Fields

(1) Chemical Process Machinery

- Equipment diagnosis engineering
- Computer aided engineering for chemical process equipment
- Petrochemical process machinery
- Sealing technology at extreme conditions
- ► Separation technology and equipment at extreme conditions



(3) Micro and Nano Fabrication

- ► Fabrication of micro heat exchanger and micro needles
- Micro extrusion embossing
- Differential injection molding technology



College of Mechanical and Electrical Engineering



(2) Polymer Processing Machinery

- ► Twin screw extrusion
- ► Precision injection molding
- ► Precision extrusion
- ► Foaming technology

College of Information Science and Technology

stablished in March of 2000, the College of L Information Science and Technology (CIST) was an amalgamation of the two former departments, the Department of Process Automation and the Department of Computer Science and Technology. There are totally 151 faculty and staff members, including one academician of the Chinese Academy of Engineering, 36 professors and 42 associate professors and senior researchers. Almost 75% of the faculty members hold Ph.D. degrees. The College of Information

Science and Technology has established a cultivation system for undergraduates, post-graduates, doctors and international students. The college has now over 600 Ph.D. students and post-graduate students and about 2700 undergraduate students. The college has been strengthening its international cooperation and exchanges with many universities and research institutes in the world, including Britain, America, Japan, Canada, Australia, Korea, Singapore, France, etc.

Departments

- Automation
- Computer Science and Technology
- Measurement and Control
- Information Engineering



National Ministry Research Institutions

▲ Engineering Research Center of Intelligent Process System Engineering,

Ministry of Education

- · Laboratory of Intelligent Engineering
- Laboratory of System Engineering
- · Laboratory of System Optimization Theory and Application

▲ System Simulation Technology Research Center of Former Ministry of Chemical Industry

- · Laboratory of Process System Simulation
- · Laboratory of Process System Simulation, Optimization and Control

▲ Engineering Research Center of Chemical Process Safety, Ministry of education

- Laboratory of Intelligent System and Safety Engineering
- · Laboratory of Process Fault and Abnormal Situation Information Guide System
- · Laboratory of Computer Intelligent System Safety Evaluation

▲ Safety Science and Monitor Engineering Center

Research Institutions of University

▲ Research Institute of Automation

- · Laboratory of Advanced Process Control
- Laboratory of Microscopic Quality Control for Polymerization Process

Research Institute of Measurement and Control

- · Laboratory of Industry Process Intelligent Detection and Sensor Technology
- · Laboratory of Network Measurement Technology
- · Laboratory of Virtual Instrument
- ▲ Research Institute of Computer Applications
- · Laboratory of Network Database
- Laboratory of Computer Assistant Testing
- Laboratory of Network MIS
- · Laboratory of Software Testing and Knowledge Management

Research Center for Information Safety





Main Research Projects

(1)Intelligent Engineering

- Artificial Neural Networks
- Data Mining
- Extension Theory and Applications
- Modeling, Optimization and Fault Diagnosis for Process Industry
- Virtual Reality and Geographic Information System(VRGIS)

(2)Process Systems Engineering

- Mass Integration, Energy Integration, and Process Intensification
- Integration of Process Design and Process Operation
- Modeling, Control, and Optimization of Chemical Processes

(3)Advanced Process Control

- Research of Advanced Process Control and its Application in Industrial Process
- · System Modeling and Optimization

(4)Intelligent Measurement and Advanced Sensor Technology

- Theories and Techniques of Intelligent Measurement for complex industrial process
- Intelligent measurement & control system
- Advanced Sensor Technology

(5) Detection Techniques and Information Processing

- · Power Quality Analysis and Data Compression
- Monitoring System of PLC Communication Channel
- Remote Monitoring System of Pipeline and Data Compression Technology
- Automatic Testing System of Communication Devices
- Fault Diagnosis and Test of Digital and Analog Circuits

(6)Process Modeling, Simulation, Optimization and Control

- Process modeling and simulation
- Process optimization
- Advanced control

Research Institutions

(7)Process Control, Supervision, and Optimization

- · Control and operating performance assessment and improvement
- Intelligent technologies with applications in process control engineering
- Fuzzy optimization and decision-making

(8)Advanced Process Control and Information Fusion

- Advanced Process Control for Complex Industrial Process
- Automation System Based on Information Fusion
- Process Monitoring, Controller Performance Assessment and Self-healing

(9)Software Engineering

- Search-based Software Engineering and Testing
- Specifications and Programs Based Test Data Generation on
- EFSM Models-based Test Cases Generation
- Search-based Software Engineering and Testing
- Model-based Slicing and Testing
- Program Analysis and Manipulation

(10)Embedded System Design

- Embedded System Development
- Mobile Broadband Communication and FHSS Technology
- Image Coding and Target Tracking

(11)Information Security

- E-Forensics
- Network Security

(12)Health Informatics

- Modeling, optimization, and control for biomedical processes (e.g. artificial pancreas)
- Modeling, optimization, and control for batch processes (e.g. injection molding process)
- State monitoring and Fault-tolerant control
- · Wireless sensor network

College of Economics and Management





The College of Economics and Management was established in 1994 and is located on the east campus of BUCT. There are 76 faculty members at present including 14 full professors and 27 associate professors. In the present faculty staff, there are the winner of National Science Fund for Distinguished Young Scholars, the chief scientist of National "973" Key Basic Research Project, the winner of Chinese Youth Science and Technology, the winner of 100 Excellent Doctoral Dissertation, and the winner of "New Century Excellent Talents of Ministry of Education". In addition, many well-known scholars, experts, professors, entrepreneurs have been hired as part-time professors for student education and training.

The college has 1200 undergraduates and 240 graduates with Master's Degree programs in Management Science and Engineering, in Technical Economics & Management, and in Business Administration and 10 PhD students in Chemical Safety Management. It has six bachelor degree programs in Information Management & Information Systems, Business Administration, Logistics Management, International Economics & Trade, Economics, Financial Management, and Accountancy.

The College has established a long-term international cooperation with ESEC (American Educational Services Exchanges with China) in conducting international business courses, which are part of the bachelor degree programs. The college is active in research and academic exchanges, and staff has over 100 academic papers published in specialized periodicals each year.

Departments

- Department of Management Science and Engineering
- Department of Business Administration
- Department of Economics, Department of Logistics Management
- · Department of Financial Management
- · Department of Accounting, the Safety Management Institute of Chemical Industry

Research Institutes

- · Institute of Low-Carbon Economics and Environment Management, Network Performance Evolution Center of China
- Institute of Financial Engineering Research
- · Centre for Energy Chemical Management









Main Research Fields







• Energy Chemical Management Chemical Safety Management • Energy Chemical Finance Chemical Logistics Management • Engineering Management Business Intelligence and Decision Support Systems • Industrial Engineering • Technology Innovation Management • International Economics and Trade



College of Humanities and Law





The College of Humanities and Law was established in March 2000 as the only college of liberal arts in BUCT.

There are two master programs: the program of Law, the program of Administration.

The College of Humanities and Law has a strong team of 198 full-time teachers, including 14 professors and 69 associate professors who play leading roles in both teaching and research. In addition, many eminent young scholars are working in the College.



The College of Humanities and Law possesses

advanced modern teaching facilities, such as language labs, liberal arts labs, a psychoanalysis center and a model court for law students. Apart from these, the College houses an Intellectual Property Base and a Quality Education Base. All of these provide the students with an ideal study environment. This makes it possible to realize the College's objective, which is to supply the country with well-qualified personnel.

The College has an academic committee, a teaching supervision committee, an academic staff appraisal committee, a teaching-quality evaluation panel and an undergraduate teaching review and appraisal panel. The College also has a group of teaching inspectors.

At present, over 1400 students are studying in the College. Joint efforts by both teachers and students have created a favorable environment in which to foster the all-round development of the students morally, intellectually and physically. Various extra-curricular activities have been organized by the students, such as debating, providing a consulting service on legal matters, mock trials in a model court and putting on short English plays. All of these have helped to set up an image of the students of liberal arts in BUCT: active, intelligent, creative, eloquent, and cooperative.

> A promising future can be predicted for the College of Humanities and Law!

Departments

- Department of Foreign Languages
- Department of Social Sciences
- Department of Physical Education











Research Institutes

- Institute of Higher Education
- · Institute of Law and Intellectual Property Law
- Institute of Politics and Science of Administration
- Institute of English Language

College of Marxism





The College of Marxism was established in May 2011 as one of the faculties of liberal arts in Beijing University of Chemical Technology. The college has a strong team of 52 teachers, including 22 full-time teachers. Among them, there are 15 professors, 20 associate professors and 17 lecturers. At present, 92 master candidates are pursuing their degrees in the college.

The college is composed of a teaching division and two research institutes. The teaching division consists of four teams, namely, Moral Education and Fundamentals of Law, Modern History of China, Fundamental Marxist Theories as well as Maoism and Socialism with Chinese Characteristics. The research institutes include the Institute of Science, Technology and Society and the Institute of Marxism (under construction).





Currently, the college is working on the construction of the discipline of Marxist Theories and the cultivation of postgraduate students and it has accomplished great academic achievements so far. The college will continue to commit itself to turning out qualified talents for society and providing support in terms of talents and thoughts for the ideological and political education and the development of Marxist theories in China.

A sone of the achievements of internationalization of BUCT, School of International Education (SIE) was founded in 2011 to establish a new platform for international+ education and communication for students. SIE currently offers international education programs such as pre-university and pre-master programs, foreign language training programs, executive education programs and technical training programs. It endeavors to create high quality learning opportunities for students to pursue their international outlook and develop their competence and skills in their careers.

The Education and Training Centre of BUCT (ETC), administered by SIE, is the main department responsible for implementing teaching and training of the above-mentioned programs. It has been successfully running Cambridge ESOL training courses including preparatory courses for Main Suite Examinations (MSE) and Teaching Knowledge Test (TKT), Pre-master courses for BUCT undergraduates aiming at entry to German prestigious universities and a high standard Tertiary Preparatory Program (TPP) (fulltime) which prepares school graduates for their degree study in the US, UK, Canada, Australia and Singapore.





College of Continuing Education has a history of 50 years and adopts a strategy of "focusing on the specific needs of industries, society and grassroots level". Its mission statement is "to guarantee education quality and to produce top quality talents". The college produced more than 25,000 professionals for China and enjoys high reputation. There are currently about 9,000 students and the college hosts diverse education forms of correspondence courses, evening courses, continuing education and on-the-job training programs. The college offers several BA programs targeting at students with different levels of certificates and diplomas. There are dozens of BA and diploma programs

covering a wide range of majors in science and engineering, management, and arts. There are 18 correspondence education stations in 13 provinces in China.

College of Vocational and Technical began to enroll students in 1999 and is in charge of the recruitment, teaching and management of higher vocational technical education. The college is staffed with the leading teaching resource of the university and emphasizes cooperation and exchange with relevant industries and companies, which makes it possible to invite industrial professionals to present lectures to students. The college takes the quality of teaching and the quality education as its priorities, managing to construct a complete teaching system centering on "the cultivation of competence, the capacity of technical application, and the cultivation of basic quality" so as to meet social demands. It adopts multiple teaching methods, strict student management principles, and diverse practical activities to produce quality, knowledgeable and capable senior professionals. There are currently nearly 1,200 students at the college, enjoying a complete employment services. The employment rate of the recent years is higher than 95%. The college offers the following majors: computer network technologies, computer multi-media technologies, environment monitor and evaluation, industrial analysis and inspection, accounting, secretary, design and make with multi-media, design for human images. The major of design for human images is the only one among similar majors being approved by both Beijing and Ministry of Education as the experimental major for higher vocational and technological education reform.



The library of Beijing University of Chemical Technology was founded in 1958 and possesses nowadays three buildings. They are the Yi Fu branch, the Rong Mao branch and the northern campus branch, covering an area over 26600 square meters. This forms a library documentation and information system featuring chemistry and the chemical industry, based on its 1.5 million copies of paperbased resources, 1.7 million copies of electronic books and 520,000 copies of electronic degree thesis till September 2011. Also, it has over 39 imported databases, including CNKI, WANFANG Databases System, IEEE, SCI, EI, CA, and so on.

There are 17 large-scale reading rooms for newspapers and periodicals, Chinese books, Chinese academic periodicals, foreign literatures, literature retrieval, electronic documentation, audiovisual materials, and three book stack rooms. Also facilitated in the library are 2500 seats in its 5 electronic reading rooms.

Advanced in facilities, bright and clean, this library makes its complete and reliable LAN connected to the campus network, and also the Internet. There are 260 computer terminals and 1040 information points, available for readers' access to electronic information services in all directions.

In 1999, it passed the automatic and networking assessments organized and performed by the Beijing Municipality Education Committee and Beijing Colleges and Universities Organizing Committee for Library, with Class A standard obtained as a result. In 2003, it was appraised as an "Advanced Library" by the North China College and University Library Association. It is a member library of the Beijing College and University Library Working Committee, and director library of the Beijing College and University Digital Library Research Society. It is also the home of the station master unit and secretariat of the National Chemical Industry College and University Information Unit location, in connection with dozens of domestic colleges, universities, and research institutions.

In recent years, it carries out a completely new open service mode, providing readers not only with a book borrowing and returning services, but also with an information and consulting service. Other services include a fixed topic service and services for search-forupdating information, inter-library unified borrowing and returning between the three campus library branches, readers-training, and so on.

BUCT Library



UCT is one of the top 100 public universities among 1,792 Chinese higher education institutes. It offers more than B 44 undergraduate areas of study, 88 master programs and 26 Ph. D programs. Applicants from all over the world are welcome to study at BUCT.

Programs

- 1. Bachelor Program Specialties: Please see Undergraduate Studies section in this booklet.
- 2. Master Program Specialties: Please see Graduate Studies section in this booklet. BUCT currently offers English-language masters programs in Chemical Engineering and in Materials Science and Engineering (Macromolecules).
- 3. Ph.D. Specialties: Please see Graduate Studies section in this booklet.
- 4. Chinese Language Study: The University offers both long-term and short-term Chinese Classes, Chinese Martial Arts, Chinese Cooking, Calligraphy and Tourism. The curriculum of Chinese Language includes: Intensive Reading, Oral Chinese, Listening, Newspaper Reading, Writing, Audio-visual, HSK Instruction, and Linguistic Practice.

Requirements for Application

- 1. Anyone who is interested in Chinese language and culture and is in good health can apply the Chinese Language Program.
- 2. Applicants for undergraduate programs are required to have an education equivalent to, or higher than, that for a Chinese senior middle school graduate; applicants for Master's degree programs should have a Bachelor's degree, applicants for Doctor's degree should have a Master's degree, applicants for further studies are required to have undergone a two-year college study program. Applicants for Master's degree or Doctoral degree should present letters of recommendation from two professors.
- 3. Applicants for Master's degree or Doctoral degree should present a research plan of their study at BUCT, and at least two letters of recommendation from professor.
- 4. All the applicants for degree study shall submit their official academic transcript.

How to apply

Return the completed application form to the international exchange and cooperation by mail, fax, e-mail or in person. After examination, you can get the visa application form and Admission Notice in one month.







Expenses

1. Application Fee:	RMB 500 Yuan per person
2. Tuition:	RMB 35,000 Yuan per academic year for
	RMB 30,000 Yuan per academic year for
	RMB 35,000 Yuan per academic year for
	RMB 20,000Yuan per academic year for l
	RMB 30,000 Yuan per academic year for
	RMB 25,000 Yuan per academic year for
	RMB 8250 Yuan per academic semester f
3. Accommodation:	RMB 50 Yuan/day, per bed in the east can
	RMB10,800 Yuan/year (12 months) in the
4. Insurance fee:	RMB 600 Yuan per year.

Join with students from more than 40 countries who are developing their skills, abilities and talents - academically, socially, artistically, and athletically. We pride in offering the best services, highest quality courses and most modernly equipped classroom equipment and facilities to our international students, such that students are able to enjoy their learning environment and be provided with the best effects of learning.

For more information, please contact:

International Exchange and Cooperation Department Beijing University of Chemical Technology No. 15 Bei San Huan East Road Beijing, 100029 P.R. China

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Information for International Students

- Ph.d degree programs.
- Master's degree programs.
- English-language Masters Program.
- Bachelor's degree programs.
- advanced further study programs.
- further study programs.
- or Chinese language learning.
- npus (standard room, shared by 2 persons).
- e north campus.

Inspiring Campus Life



Butta pays special attention to and actively organizes extra-curriculum competitions on scientific and technological achievements and professional competitions involving multiple disciplines. In recent years, 50 person have won the first prize and 212 person have won the second prize at national level as well as 413 person have won special prize, first prizes and second prizes in Beijing in different competitions including the national and Beijing Challenge Cup of college student extra-curriculum technological and academic works, electronics design competitions, mathematics modeling competitions and others. In the

mathematics modeling competition, BUCT ranked number one several times in the country and won the trophy for the higher education community. In addition, students of BUCT take part in many sports and arts competitions actively. They have won many famous prizes at nation and abroad.



BUCT also actively participates in social practice to improve the comprehensive capacity of students. Each year, nearly 5,000 students go to urban and suburban areas of Beijing, chemical plants and petrochemical production bases for more social practices. Several teams of volunteers in summer holidays go to the countryside and contribute to the rural development of technology, culture and public health. BUCT has been praised as an advanced unit in social practice among higher education institutions in the capital city by the Publicity Department, the Beijing Municipal Education Commission, and Beijing Communist Youth Leagues Commission for successive years.

