**The Specialty of Mechanical Design & Manufacturing and Automation**

**(Sino-US Cooperative Education)**

**(The Specialty of Foreign Partner: Robotics and Electromechanical Systems Engineering)**

This program is a Sino-foreign cooperative undergraduate program approved by the Ministry of Education (approval number: MOE11US2A20131521N, specialty code: 080202H). This program is cooperatively organized by our university and University of Detroit Mercy (UDM), wherein, the specialty of BUCT is Mechanical Design & Manufacturing and Automation, and the specialty of UDM is Robotics and Mechatronics Systems Engineering.

**Education Mode and Degree Awarding:**

The education mode of this program is “3+1”, i.e. where students study in China for the first three years and abroad for the 4th year. Students, who have completed the required course work and passed the examination, will receive an undergraduate diploma and bachelor degree of engineering science of "Mechanical Design & Manufacturing and Automation" specialty from BUCT and the bachelor degree of engineering science of "Robotics and Mechatronics Systems Engineering" specialty from UDM.

**Program Features:**

1. The combination of core specialties of two universities from China and USA help cultivate the new-style interdisciplinary engineering talents urgently needed at home and abroad, and the students will have huge employment potential.

2. The program features a team composed of excellent Chinese and foreign teachers, and more than one-third of Professional Core Courses are taught by foreign faculty.

3. University of Detroit Mercy works closely with GM, Ford and Chrysler and therefore its curriculum is tailored to the needs of the companies and cutting-edge.

4. Upon completing four years of undergraduate studying, students will be awarded two degree diplomas from a 211 key university and from a foreign university.

5. Compared with studying abroad for four years, family's investment in education decreases by a large amount.

6. The graduates have the priority to enter into the master degree and doctor degree programs at UDM.

**Professional Core Courses:**

Robotics, Automatic Mobile Robots, Mechanical Design Foundation, Mechanical Manufacturing Technology, Control Engineering Foundation, Electrical Engineering Foundation, Mechanical Modeling & Simulation, Electromechanical Energy Conversion, etc.

**Introduction to the University of Detroit Mercy:**

University of Detroit Mercy is a comprehensive private university initially founded in 1877 around the Great Lakes, where there are 8 colleges and schools, including College of Engineering & Science, College of Business Administration, School of Law, School of Architecture, College of Liberal Arts & Education, College of Health Professions and McAuley School of Nursing, School of Dentistry and College of Health Professions, offering more than 100 majors. The university has been ranked among Best Business Schools in the United States by *US News & World Report* for 12 consecutive years and selected as the R1 educational institution in Michigan among 145 universities in the Midwestern United States. The undergraduate program of the College of Engineering & Science is ranked among top 100 engineering majors in the United States (from *US News & World Report*). At present, there are only five universities offering “Robots and Electromechanical Systems Engineering” at undergraduate level in the United States. University of Detroit Mercy is the only university to offer this major in the Midwest of the United States.

**The Specialty of Bioengineering (Sino-US Cooperative Education)**

**(The Specialty of Foreign Partner: Bioprocess Engineering)**

This program is a Sino-foreign cooperative undergraduate program approved by the Ministry of Education (approval number: MOE11US2A20141600N, specialty code: 083001H). This program is cooperatively organized by BUCT and SUNY College of Environmental Science and Forestry (SUNY-ESF), wherein, the specialty of BUCT is Bioengineering, and the specialty of SUNY-ESF is Bioprocess Engineering.

**Education Mode and Degree Awarding:**

The education mode of this program is “3+1”, i.e. where students study in China for the first three years and abroad for the 4th year. Students, who have completed the required course work and passed the examination, will receive an undergraduate diploma and bachelor degree of engineering science of "Bioengineering" specialty of BUCT and the bachelor degree of engineering science of "Bioprocess Engineering" specialty of SUNY-ESF.

**Program Features:**

1. The powerful cooperation of core specialties of two universities in China and USA combine the advantages of two universities, therefore the specialty has a promising professional prospect.

2. Upon completing four years of undergraduate study, students will be awarded two degree diplomas from two excellent universities from China and from USA, featuring high performance cost ratio.

3. The program features a team composed of excellent Chinese and foreign teachers, and more than one-third of Professional Core Courses are taught by foreign faculty.

4. Compared with studying abroad for four years, family's investment in education decreased by a large amount.

5. The graduates have the priority to enter into the master degree and doctor degree programs at SUNY-ESF.

**Professional Core Courses:**

Biochemistry, Microbiology, Biotechnology, Bioprocess Dynamics and Systems Engineering, Process Control, Biochemical Separation, Bioengineering Design, etc.

**Introduction to SUNY College of Environmental Science and Forestry:**

SUNY College of Environmental Science and Forestry (SUNY-ESF), founded in 1911, is a public education institution in America and one of the oldest colleges in the New York state university system. It is ranked in top 100 among American comprehensive universities according to the report of *U.S News & World Report* and ranked No. 46 among the public universities. The college's bioengineering program enjoys a high reputation among similar programs of American universities, and has produced a large number of outstanding engineers for the emerging biotechnology and biofuel industries in the United States. SUNY-ESF attaches great importance to the study and research on using renewable biological resources instead of petroleum and other non-renewable traditional industrial raw materials. The college's teaching approach of combining the learning, research and practice has equipped the students with strong innovation and industry practice ability. Therefore, its graduates are widely welcomed by employers in many industries, such as agriculture, industry, medicine, pharmacology, chemical materials, energy, environmental protection and light industry and food industry.

**The Specialty of Industrial Design (China-Italy Cooperative Education)**

**(The Specialty of Foreign Partner: Product and Ship Design)**

This program is a Sino-foreign cooperative undergraduate project approved by the Ministry of Education (approval number: MOE11IT2A20151742N, specialty code: 080205H). This program is cooperatively carried out by BUCT and the University of Genoa (Genoa), and the specialty of foreign partner is Product and Ship Design (industrial design direction).

**Education Mode and Degree Awarding:**

The education mode of this program is “4+0”, where students spend four years studying in China. Students, who have completed the required course work and passed the examination, will receive an undergraduate diploma and bachelor degree of "Industrial Design" specialty of BUCT and the bachelor degree of "Product and Ship Design" specialty of Genoa.

**Program Features:**

1. The powerful combination of dominant specialties of BUCT and a top Italian university will enable students to obtain interdisciplinary knowledge and skills, and the specialty has a huge professional development potential.

2. Upon completing tour years of undergraduate studying in China, students will be awarded two degree diplomas from two excellent universities in China and in Italy and the graduates have outstanding employment advantages.

3. The introduction of 100% foreign curriculum system allows students to take advantage of high-quality educational resources of the two universities at home and abroad, featuring high performance cost ratio.

4. The majority of the professional core courses will be taught by excellent faculty of Genoa.

5. The students may apply to participate in the exchange program with Genoa during their studying at the university, with tuition exemption.

6. The students who obtained double degree will be directly admitted to the master degree program of Product Design Specialty at Genoa.

**Professional Core Courses:**

Design Laboratory, Product Image Design Laboratory, Theme Design Laboratory I/II, Subject Product Image Design Laboratory, Interior Design, Multimedia Design, Design Basis, Design History, etc.

**Introduction to the University of Genoa:**

University of Genoa, founded in 1471, is one of the oldest universities in Europe and of the most famous comprehensive public universities in Italy. Genoa has five undergraduate divisions, including Engineering Science, Natural Science, Medicine, Social Sciences and Humanities, offering 280 disciplines. With 55 (graduate) colleges, 126 undergraduate degree programs (specialties), 26 master's degree programs (specialties) and 27 doctoral degree programs, Genoa is worthy of her name as a multidisciplinary education system. Moreover, Genoa enjoys a high international reputation in many research fields, such as Architecture (Design), Oceanography, Medicine, Engineering, Economics, and Law, etc.