EDUCATION TO MEET THE NEEDS OF FUTURE GLOBAL AVIATION COMMUNITY

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CONTENT

- Trends of Global Aviation Industry
- Demand for Future Aviation Talents
- Beihang’s Education Practice
TRENDS OF GLOBAL AVIATION INDUSTRY

◆ Increasing markets and demands for aviation professionals

◆ Technology advancement:
  ◆ Personalization
  ◆ Automation
  ◆ Intelligentization
  ◆ Digitalization

◆ Challenges
  ◆ Safety
  ◆ Sustainability
By 2032, 20,530 more airplanes needed globally, among which
- **9,660 (1.89 trillion USD worth)** needed in Asia Pacific
- **Boeing**: China will need **7,690** new airplanes by 2037
- **Airbus**: **110,000** more aviators needed in China by 2035

China is scheduled to train nearly **3,000 pilots** and 8,000 support personnel each year, with an annual growth rate of 10%-15%

By 2030, China will be the world’s **largest civil aviation market** and the **largest training base** for aviation professionals
DEMAND FOR FUTURE TALENTS

- Capacities in global vision, systematic thinking, collaboration and innovation
- Ready to face the challenges of the diverse and rapidly changing world
  - understanding of different cultures and familiarity with general practices
  - systematic thinking and multi-disciplinary knowledge
  - innovation and critical thinking ability to tackle complex problems
  - collaboration and leadership skills
EDUCATION PHYLOSOPHY FOR NEXT GENERATION AVIATION TALENTS

◆ Qualities of future talents

- Strong intercultural competence
- Fine humanistic qualities
- Excellent professional skills
- Solid scientific foundation
EDUCATION PHYLOSOPHY FOR NEXT GENERATION AVIATION TALENTS

Ways to educate future talents

- Combine teaching with scientific research
- Combine teaching with Industrial practice
- International cooperation
BEIHANG UNIVERSITY

History
one of China’s very first key universities established in 1952 through merger of the aeronautics departments of 8 top Chinese universities

- Tsinghua University, Tianjin University
- Xiamen University, Sichuan University
- ......

Today
a leading research university in China listed in all national initiatives for universities
National 211 Project
to develop key disciplinary areas (112 universities)
National 985 Project
to build world-class universities (39 universities)
National 2011 Project
to promote “collaborative innovation”
National Double World-Class Project NEW
Among one of the 36 World-Class Universities in China
7 disciplines selected as World-Class Disciplines
33 Schools

- Aeronautical science & engineering
- Astronautics
- Automation science & electrical engineering
- Computer science & engineering
- Cyberspace Security
- Electronic & information engineering
- Energy & power engineering
- Instrument science & optoelectronics
- Materials science & engineering
- Mechanical engineering & automation
- Microelectronics
- Reliability & systems engineering
- Software engineering
- Space & environment
- Transportation science & engineering
- Biological science & medical engineering
- Chemistry
- Mathematics & systems science
- Physics

- Economics & management
- Foreign languages
- Humanities & social sciences
- Law
- New media art & design
- Political science

- Honors College
- Advanced studies in humanities & social sciences
- International School
- Sino-French Engineer School
- General Engineering
- Flight college (pilot training)
- Beidou Belt & Road School
BEIHANG UNIVERSITY

- Ranked **1st worldwide** in **Aerospace Engineering** according to ShanghaiRanking 2018
- Ranked **1st** nation-wide for per faculty member research funding
- Ranked **1st** nation-wide for total number (8) of the First Prizes of National Technology Invention Awards

**Aeronautics & Astronautics**
- materials,
- mechanical aeronautics,
- astronautics, energy and power,
- instrumentation……

**Information & Communication Technology**
- electronics, cyber security, computer science, software engineering, automation ……
BEIHANG UNIVERSITY

- National ranking for main disciplines

A+
Top 2%
- Aeronautics and Astronautics
- Instrument Science and Technology
- Materials Science and Engineering
- Software Engineering

A
Top 2%-5%
- Computer Science and Technology
- Control Science and Engineering
- Management Science and Engineering

A-
Top 5%-10%
- Mechanics
- Transportation Engineering
- Biomedical Engineering
- Mechanical Engineering
- Information and Communication Engineering
- Public Administration
- Foreign Language and Literature

✔ Ranked 11th nationally with four A+ disciplines
✔ Ranked 12th nationally with all A-level disciplines
A large number of chief commanders and chief designers of AVIC, COMAC, AECC and other leading enterprises in China’s aeronautical industry are Beihang Alumni.

A large number of chief commanders and chief designers in China’s astronautical industry are Beihang Alumni.

The Flight College of Beihang University has educated more than 6000 pilots, 4500 of which worked at China Southern Airlines.
BEIHANG’S EDUCATION PRACTICE

- International Education Flagship Programs

**International School**
- 2,000+ International students from over 110 countries
- UN Regional Center for Space Science and Technology Education in Asia And the Pacific (China)
- APSCCO Education and Training Center in China

**Sino-French Engineer School**
- Founded in 2005 with an annual enrollment of 120 students
- Strong collaboration with French partners in cultivating high-calibre engineers with international recognition

**School of General Engineering**
- Founded in 2015 with an annual enrollment of 50 students
- To develop top-notch engineer with international competence & leadership skills with international faculty and small-class models
BEIHANG’S EDUCATION PRACTICE

◆ Innovation and entrepreneurship

Extracurricular Innovation & Practice Platform

Launched in 1990, held for 28 consecutive years

The most prestigious and widely-participated scientific competition at Beihang University

China’s “Wright”

Feng Ru(1884~1912)
The first aircraft designer
The first aircraft maker
The first pilot
BEIHANG’S EDUCATION PRACTICE

◆ Innovation and entrepreneurship

Unicorn Unmanned Vehicle System

• 1st Prize of Beihang “Feng Ru Cup” Technology Competition
• 2nd Prize on Technology of Beihang “Challenge Cup”
National Undergraduates Academic Science and Technology Competition
• Champion of China’s “Internet+” Undergraduates Innovation and Entrepreneurship competition

Inventor:
• LI Chen, undergraduate of School of Computer Science and Engineering, Beihang University
• WANG Chuan, undergraduate of School of Aeronautic Science and Engineering, Beihang University
• Co-founded Tianxun Innovation and Technology Corp. Ltd.

• The company is worth RMB 200 million and its annual sale reaches 10 million
BEIHANG’S EDUCATION PRACTICE

- International Cooperation

200+
Global partners

105
Student mobility programs

31
Double degree programs

35.6%
undergraduate students with overseas experience

Over 2500
Students study abroad annually

Partners around the world
BEIHANG’S EDUCATION PRACTICE

◆ International Education Cooperation

<table>
<thead>
<tr>
<th>University</th>
<th>Aviation Programs</th>
<th>Degree</th>
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<tbody>
<tr>
<td>Ecole Nationale de l’Aviation Civile</td>
<td>Airworthiness</td>
<td>Double Master</td>
</tr>
<tr>
<td>Cranfield University</td>
<td>Power Engineering</td>
<td>Double Master</td>
</tr>
<tr>
<td>Politecnico di Milano</td>
<td>Electromechanical Engineering</td>
<td>Double Master</td>
</tr>
<tr>
<td></td>
<td>Advance Aircraft Design</td>
<td>Double PhD</td>
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<tr>
<td>Moscow Aviation Institute</td>
<td>Aeronautical Engineering</td>
<td>Double Master</td>
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◆ Industrial Partners

![Industrial Partners Logos]
THANK YOU!