



北京航空航天大学 中法航空学院

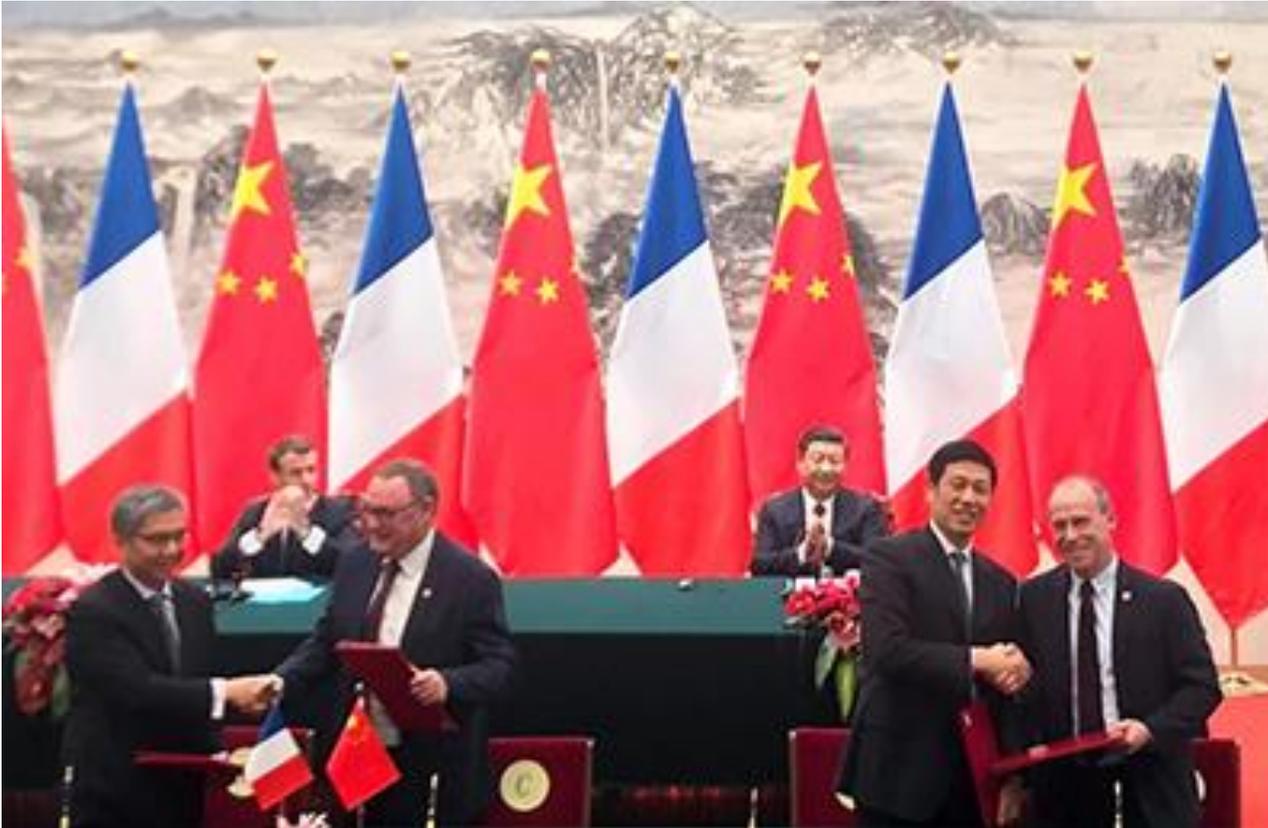
Zhongfa Aviation Institute of Beihang University



A sino-french Institute of engineering in Civil Aviation



Signature of a memorandum of cooperation in January 2018



On 9th January 2018, under the joint testimony of President Xi Jinping and President Macron, Beihang University (BUAA) and French Ecole Nationale de l'Aviation Civile (ENAC) signed a memorandum of cooperation in the Great Hall of the People in Beijing, under which the two institutions will jointly establish a Sino-French aviation education and research institution as a Sino-foreign cooperation higher education institution in Hangzhou, Zhejiang province.

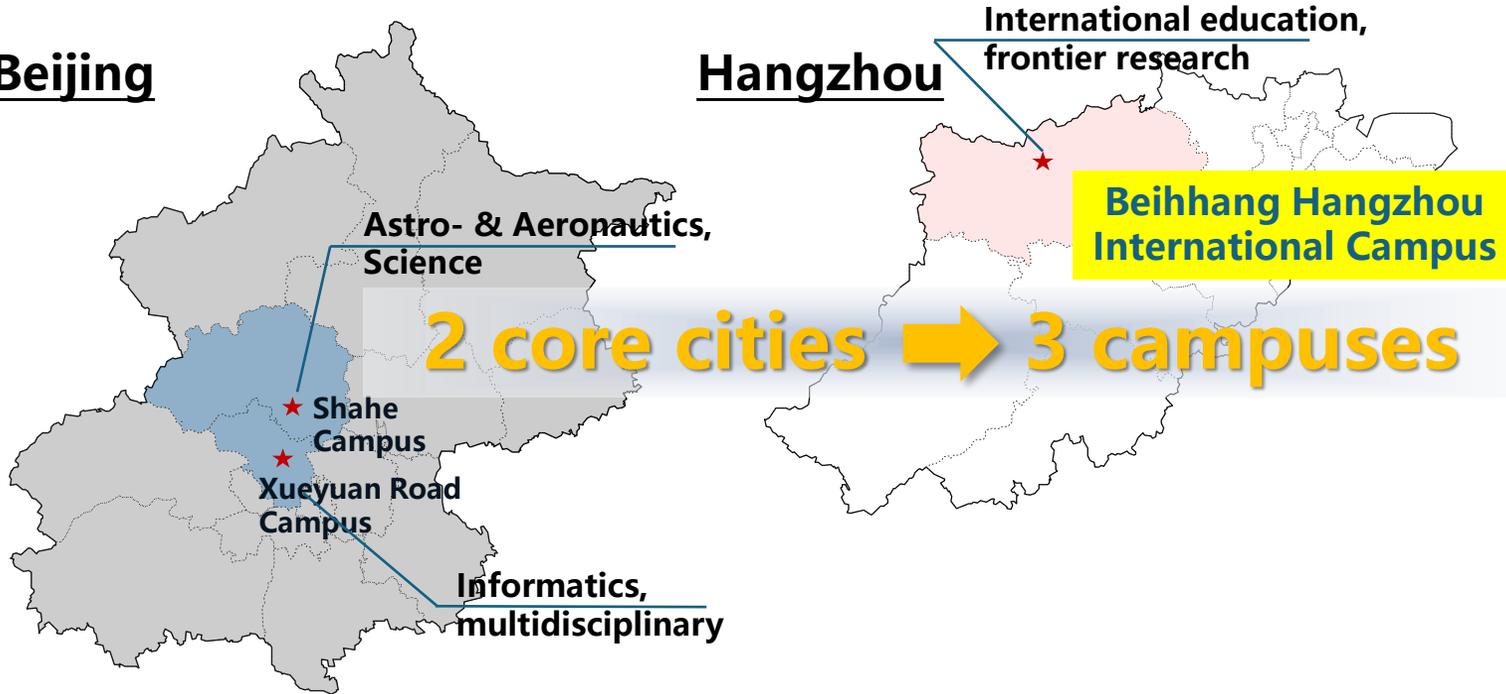
北京航空航天大学

This memorandum of cooperation was the first step towards the creation of a new international campus of Beihang in Hangzhou which finally opened in April 2023

Beihang - a new chapter, 3 campuses in 2 cities

Beijing

Hangzhou



-  International Education Center
-  High-level Talent Hub
-  Multidisciplinary frontier
-  Major R&D Center
-  International platform

Shahe Campus
1km²



Xueyuan Road
1km²



Hangzhou International Campus
1km²



Major driving force for Education, Research and Talent Development of Beihang University

6100 + FACULTY AND STAFF MEMBERS	39000 + TOTAL ENROLLMENT	1100 + INTERNATIONAL STUDENTS
16000 + UNDERGRADUATES	22000 + POSTGRADUATES	

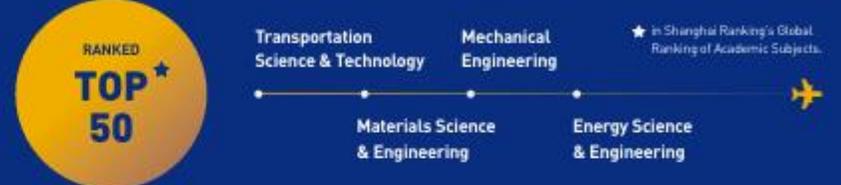
Beihang - a new chapter, 3 campuses in 2 cities

EDUCATION

WELL-KNOWN FOR ITS ACADEMIC EXCELLENCE AND A WIDE RANGE OF ACADEMIC PROGRAMS, BEIHANG UNIVERSITY ATTRACTS THE EXCELLENT STUDENTS FROM ALL OVER THE WORLD.

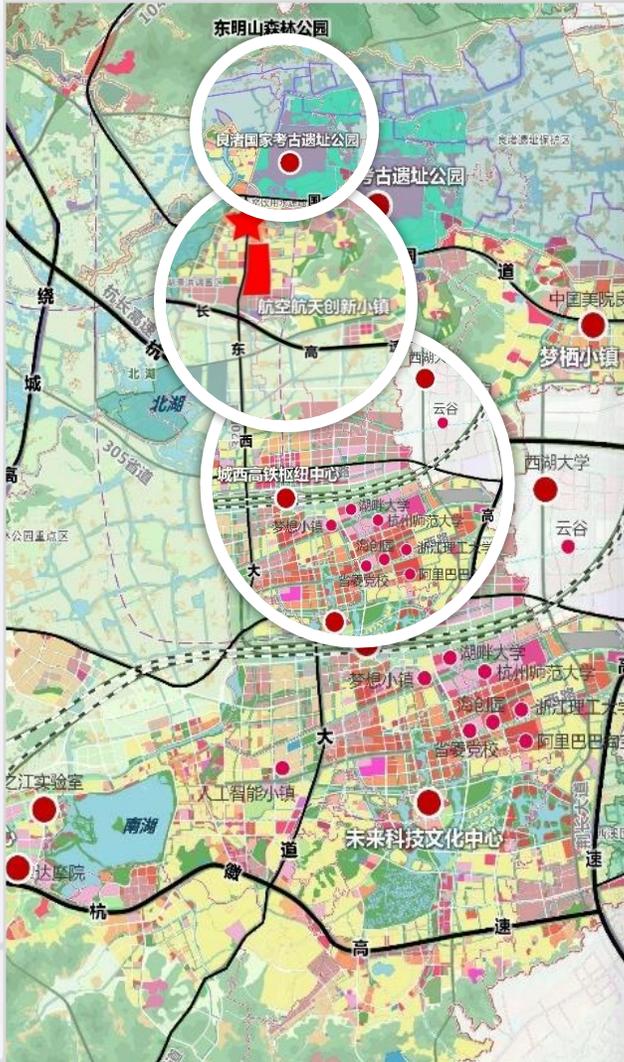


- 36** FIRST-LEVEL DISCIPLINES
- 78** UNDERGRADUATE PROGRAMS
- 23** POST-DOCTORAL RESEARCH CENTERS
- 36** MASTER'S PROGRAMS
- 8** DOUBLE FIRST-CLASS DISCIPLINES
- 10** DISCIPLINE CATEGORIES
- 33** DOCTORAL PROGRAMS



★ BEIHANG IS THE ONLY UNIVERSITY TO WIN 18 EXCELLENCE AWARDS IN THE "CHALLENGE CUP" NATIONAL COLLEGE STUDENTS' EXTRACURRICULAR ACADEMIC SCIENCE AND TECHNOLOGY CONTEST, AFFIRMING ITS MISSION TO EDUCATE STUDENTS WITH CREATIVITY AND TEAMWORK SPIRIT.

Hangzhou International Innovative Institute Campus



1 km²
Land area



780,000 m²
Floor area



9.38 billion
Capital investment



ZFAI: a sino-french Institute in the framework of 2003 decree for creation of sino-foreign Institutes

Promulgated by **Decree No. 372** of the People's Republic of China Chinese-foreign cooperation in running schools Ordinance on **February 19, 2003** adopted by the 68th Executive meeting of the State Council, are hereby promulgated and take effect on September 1, 2003.

.....
 State encourages the introduction of foreign high quality educational resources of Chinese-foreign cooperation in running schools.
 Countries encourage Sino-foreign cooperation in running schools in the field of higher education and vocational education, encourage institutions of higher education in China and foreign well-known institutions of higher education cooperation.

- ✓ 2005: Creation of école Centrale de Pékin
- ✓ 2023: Creation of ZhongFa Aviation Institute
- ✓ 2024: 21 Institutes

IMPLANTATION DES INSTITUTS FRANCO-CHINOIS ET DES PARTENAIRES FRANCAIS		中法学院及法方合作院校地理位置	
08	ÉCOLE CENTRALE DE PÉKIN Université Beihang 北京航空航天大学中法工程师学院 Lille, Lyon, Marseille, Nantes, Paris 里尔 / 里昂 / 马赛 / 南特 / 巴黎 Beijing 北京	28	INSTITUT DE MANAGEMENT DES ARTS ET DU DESIGN Académie centrale des Beaux-Arts 中央美术学院艺术与设计管理学院 Bordeaux, Marseille, Paris 波尔多 / 马赛 / 巴黎 Shanghai 上海
12	ÉCOLE D'INGÉNIEURS CHIMIE PÉKIN Université de technologie chimique de Pékin 北京化工大学巴黎居里工程师学院 Lille, Lyon, Paris, Pau, Toulouse 里尔 / 里昂 / 巴黎 / 波城 / 图卢兹 Beijing 北京	32	INTERNATIONAL ELITE ENGINEERING SCHOOL Université de Science et Technologie de Chine de l'Est 华东理工大学国际卓越工程师学院 Bordeaux, Caen, Clermont-Ferrand, Compiègne, Lille, Limoges, Lyon, Marseille, Montpellier, Mulhouse, Nancy, Paris, Pau, Poitiers, Rennes, Rouen, Strasbourg, Toulouse 波尔多 / 卡昂 / 克莱蒙费朗 / 贡比涅 / 里昂 / 利摩日 / 里昂 / 马赛 / 蒙彼利埃 / 米卢斯 / 南锡 / 巴黎 / 波城 / 普瓦捷 / 鲁昂 / 鲁昂 / 斯特拉斯堡 / 图卢兹 Shanghai 上海
16	INSTITUT SINO-EUROPEEN D'INGÉNIEURIE DE L'AVIATION Université de l'aviation civile de Chine 中国民航大学中欧航空工程师学院 Poitiers, Toulouse 普瓦捷 / 图卢兹 Tianjin 天津	36	INSTITUT FRANCO-CHINOIS DE DESIGN DE HANGZHOU NACAA Académie des Arts de Chine 中国美术学院南特设计联合学院 Nantes 南特 Hangzhou 杭州
10	UNIVERSITÉ DE TECHNOLOGIE SINO-EUROPEENNE Université de Shanghai 上海大学中欧工程科技学院 Belfort-Montbéliard, Compiègne, Troyes 贝尔福-蒙贝利亚德 / 贡比涅 / 特鲁瓦 Shanghai 上海	38	FASHION DESIGN COLLEGE OF ISTITUTO MARANGONI Zhejiang Sci-Tech University 浙江理工大学马兰戈尼时尚设计学院 Paris 巴黎 Hangzhou 杭州
24	ÉCOLE D'INGENIEUR PARIS SJTU Université Jiaotong de Shanghai 上海交通大学巴黎卓越工程师学院 Palaiseau, Paris 帕莱塞 / 巴黎 Shanghai 上海	42	INSTITUT SINO-FRANCAIS D'AVIATION CIVILE BEIHANG-ENAC Université Beihang 北京航空航天大学中法航空学院 Toulouse 图卢兹 Hangzhou 杭州
		44	ÉCOLE NATIONALE D'INGÉNIEURS SINO-FRANCAISE DE NJUST Université des sciences et technologie de Nanjing 南京理工大学中法工程师学院 Metz 梅兹 Nanjing 南京
		48	ÉCOLE RENNAISE DE DEUXIÈME ET TROISIÈME CYCLES DE L'UNIVERSITÉ DU SUD-EST 东南大学雷恩研究生院 Rennes 雷恩 Nanjing 南京
		52	INSTITUT HOHAI-LILLE Université de Hohai 河海里尔学院 Lille 里尔 Nanjing 南京
		54	INSTITUT INTERNATIONAL CONJOINT D'AUDIT Université d'audit de Nanjing 南京审计大学国际联合审计学院 Lille 里尔 Nanjing 南京
		58	INSTITUT CONJOINT DES UNIVERSITÉS DE NINGBO ET D'ANGERS Université de Ningbo 宁波大学昂热大学联合学院 Angers 昂热 Ningbo 宁波
		62	INSTITUT FRANCO-CHINOIS DE L'UNIVERSITÉ RENMIN DE CHINE 中国人民大学法学院 Bordeaux, Marseille, Montpellier, Paris 波尔多 / 马赛 / 蒙彼利埃 / 巴黎 Suzhou 苏州
		66	INSTITUT EURO-CHINOIS POUR LES ÉNERGIES PROPRES ET RENOUVELABLES Université des sciences et technologies de Huazhong 华中科技大学中欧清洁与可再生能源学院 Paris 巴黎 Wuhan 武汉
		70	INSTITUT WUT-AMU Université de Technologie de Wuhan 武汉理工大学艾克斯马赛学院 Marseille 马赛 Wuhan 武汉
		74	INSTITUT FRANCO-CHINOIS DGUT-CNAM Université de technologie de Dongguan 东莞理工学院法国国立工艺学院联合学院 Paris 巴黎 Dongguan 东莞
		78	SHENZHEN AUDENCIA FINANCIAL TECHNOLOGY INSTITUTE Université de Shenzhen 深圳大学深圳南特金融科技学院 Nantes 南特 Shenzhen 深圳
		82	INSTITUT FRANCO-CHINOIS DE L'ÉNERGIE NUCLÉAIRE Université Sun Yat-sen 中山大学中法核工程与技术学院 Cadarache, Grenoble, Marcoule, Montpellier, Nantes, Paris, Saclay 卡达拉舍 / 格勒诺布尔 / 马尔库尔 / 蒙彼利埃 / 南特 / 巴黎 / 萨克雷 Zhuhai 珠海

北京航空航天大学

The 21 sino-french Institutes*

* Brochure IFC « Les Instituts franco-chinois de coopération universitaire 2023-24, Ambassade de France en Chine

ZhongFa Aviation Institute (ZFAI)

A Sino-French Institute for Civil Aviation

Beihang University



Two partners

ENAC



Education oriented towards Innovation: High level innovative training programs for Chinese and International students:

A **world-class engineering** curriculum (180 seats/y)

- ✓ Fundamental & Engineering Sciences for Civil Aviation
- ✓ Theory & Practice combining
- ✓ Creativity boosting, Critical Thinking
- ✓ Accredited by French CTI & Chinese Ministries
- ✓ French, Chinese & English

A **Double-Degree International Master** Program (30 seats/y)

- ✓ 3 years with part in China and part in France
- ✓ Transportation + IATSED and Aviation Transportation + IATOM
- ✓ English

Advanced Master Programs (60 seats/y)

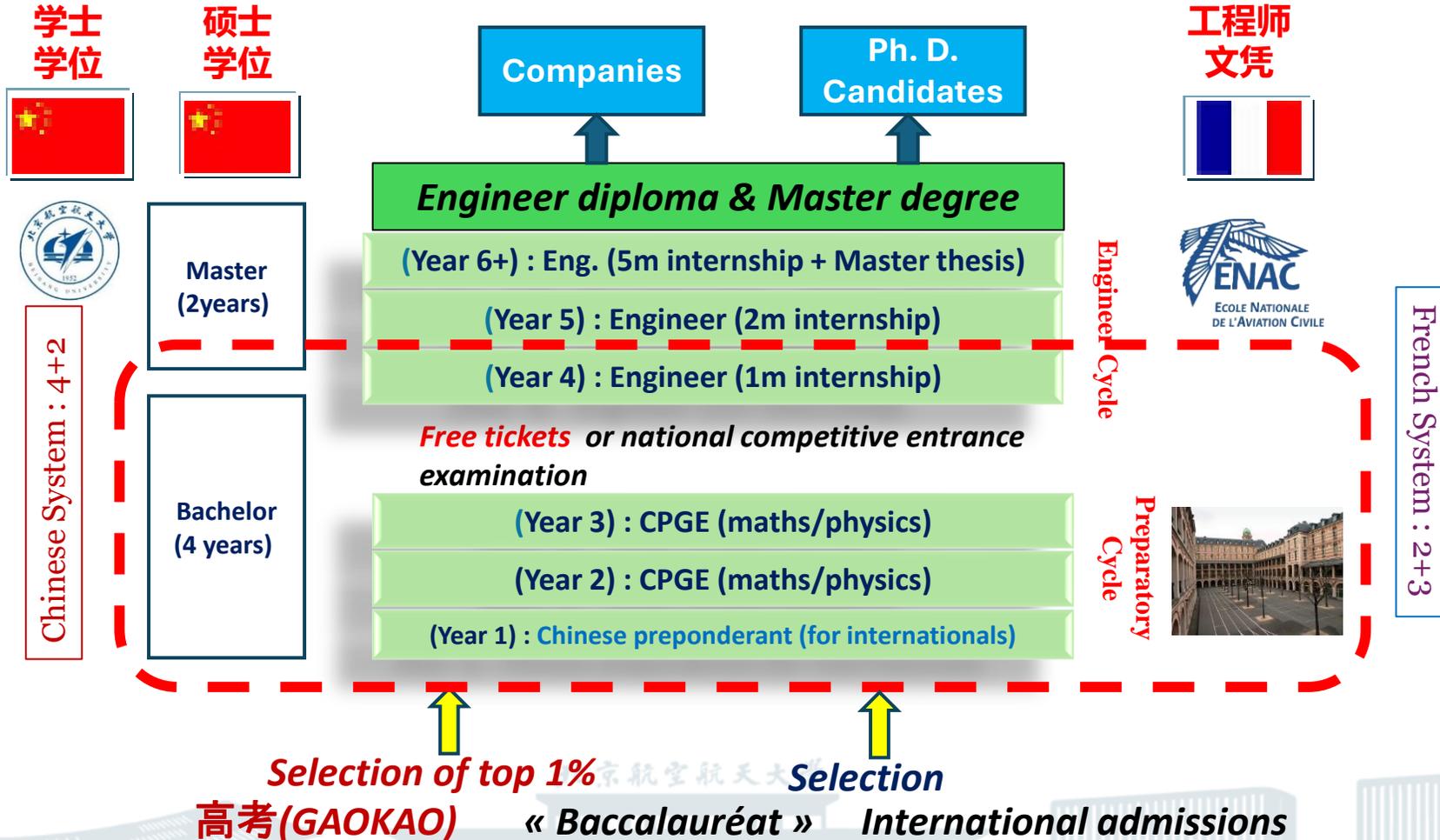
- ✓ 15 months program for professional training
- ✓ Aviation Management & Airport Management
- ✓ English



北京航空航天大学

Training Program : International Engineer

Two educative systems merged



Training Program : International Engineer

Year 1

Introduction to China (en)	32
General Physics Experiments (en)	32
Chemistry (en)	32
Fundamental of Mathematics (en)	32
Fundamental of Computer Technology (en)	40
English	32
Chinese	320

Fundamental of Maths and Physics (en+fr)	48
Mechanics (en or fr)	64
Elementary Scientific Chinese (cn)	64
English	32
Chinese	160

Year 2

Analysis 1 (fr)	64
Algebra 1 (fr)	64
Optics (fr)	64
Optics Experiments (fr)	32
English	32
Chinese	64

Analysis 2 (fr)	64
Geometry 1 (fr)	64
Waves and Electromagnetism (fr)	80
Basic Programming Design (cn)	48
English	32
Chinese	64

Year 3

Analysis 3 (fr)	48
Algebra 2 (fr)	64
Differential Equations (fr)	48
Thermodynamic (fr)	64
Fluids Mechanics (fr)	48
Industrial Sciences 1 (fr)	64
English	32

Geometry 2 (fr)	64
Probabilities (fr)	48
Numerical Analysis and Mathematical Modelling (fr)	48
Electronics (fr)	64
Electronics Experiments (fr)	32
Industrial Sciences 2 (fr)	64
Data structures and algorithms (fr)	32
English	32

(this program may be adjusted)

In year 1, most of the lectures are taught in english or in french. In year 2 and 3, the lectures are taught in french or in chinese

Training Program : International Engineer

Engineering Cycle

Year 4

• Optimization	32
• Measurement theory	16
• Probabilities and statistics	38
• Electrical engineering	32
• Deterministic signal processing	32
• The aircraft and its principles	26
• Which aircraft for which mission	10
• Introduction to airport management and operations	16
• Introduction to ATM and its evolutions	12
• Introduction to air laws	11
• Meteorology basics	12
• Basic fluid mechanics and aerodynamics	48
• Programmation et algorithmique	45
• Project management	14
• French language, cultural conferences and workshops	48
• Engineering English	48
• Professional experiment	20
• Optimization	24
• Probabilities and statistics	40
• Random signal processing	32
• Database design	56
• Networks	16
• Flight mechanics	30
• System modeling and simulation	24
• Aircraft system	18
• Multidisciplinary project bachelor thesis	176
• French language	48
• Engineering English	48
• Worker internship (during summer break)	80
• Week of science, technology and academics	10
Total	460h (96h)
Total	458h (96h)

Year 5

• Non linear optimization	20
• Stochastic process	20
• Digital electronics	32
• Representation and analysis of dynamical systems	32
• Control design and servo-loop systems	32
• Propulsion	34
• Flying qualities	34
• Advanced fluid mechanics	32
• Control Composite and special materials	36
• Flight limitations and flight management	22
• Aeronautical meteorology	13
• Air traffic management	16
• Airplane conceptual design	30
• Production and maintenance techniques	34
• Air law	20
• French language	48
• Basic aviation English	48
• Operational research for Air Transport	20
• Operational research (project)	20
• Validation and verification	26
• Real time computing and Systems	32
• Sustainable development and environment	24
• Airworthiness	44
• Project management 2	22
• Air transport economics	24
• Technician internship	160
• Aircraft avionics	14
• Automatic piloting and flight control	14
• Sensors	14
• Networks	14
• Navigation and CNS systems	24
• French language	32
• Basic aviation English	32
Total	503h (96h)
Total	496h (64h)

Year 6

• Multi-Disciplinary project	50
• Aeronautical engineering science	30
• Corporate management	32
• Business game and team organization	18
• Navigation Systems	34
• Flight Management and Guidance Systems	30
• Avionics Technology	40
• Avionics Systems Regulations	18
• Aeronautical Communication Systems	40
• Surveillance Systems	34
• Air-Ground Collaborative Applications	36
• Airline management	20
• Airport operations	20
• ATM and ATC operations	20
• Air Transport operations (project)	20
Total	442h
PFE	
• PFE	0

(this program may be adjusted)

Taught in english, french or chinese

Collaboration with industrial partners

Before graduation, the students should comprise a significant amount of industrial experience throughout the curriculum. This interaction with industrials is a particularly suitable method of achieving a number of important objectives :

- *awareness and openness to the professional world,*
- *acquisition of professional and relational skills,*
- *discovering of engineering studies in a real-life professional situation,*
- *....*

This interaction with the industrial world takes the form of different compulsory activities in the curriculum:

➤ ***Internships:***

- *1 month in 4th year (worker position, this internship must be done in a company)*
- *2 months in 5th year (assistant position, this internship can be done in a laboratory or a company)*
- *5-6 months in 6th year (engineer position, this internship must be done in a company)*

➤ ***Projects with industrials*** (1 semester or 2 semesters-long). *A group of students can work on a subject given by an industrial under the supervision of both a professor of ZFAI and a person from the company. These projects can be done by students of 4th or 5th year of studies*

Training program for international students at ZFAI

Bachelor (4 years long):

- ✓ No requirement in chinese language before admission
- ✓ Chinese lectures if necessary (HSK5 level is the target)
- ✓ French & Chinese professors
- ✓ Multi-language program (french, chinese, english)
- ✓ Preparatory school program equivalent to MPSI during the years 1,2 & 3
- ✓ 1 month operator internship between 3rd & 4th year
- ✓ 4th year equivalent to the 1st year of ENAC engineer program
- ✓ About 130 credits to validate for the Bachelor by modules (possibility of re-exam)

After the Bachelor: Several possibilities

- ✓ Admission in the Master/Engineer cycle of ZFAI (all the international students graduated with Bachelor of ZFAI can continue in Master/Engineer program of ZFAI)
- ✓ Application possible to join the engineer program of ENAC in France
- ✓ Admission in another School or University in Master or engineer Program (recruitment after Bachelor)
- ✓

Applications – Fees & Diverse costs

Ordre	Catégorie	Montant	Moyen de paiement	Remarque
1	Frais de scolarité 学费	40 000 yuans/an	Alipay ou Wechat pay ou E-CNY ou connectez-vous au site de paiement	Payer une seule fois à la première inscription.
2	Frais de dossiers 报名费	400 yuans 400元	Carte bancaire Union pay	Avant de soumettre la demande en ligne sur la page d'admission, les Frais de dossiers doivent être payés, et ces frais ne seront pas remboursés après le paiement, les étudiants doivent le confirmer puis le payer.
3	Chambre 宿舍	Pour une chambre à 2 étudiants : 2 000 yuans / an. Sous réserve de disponibilité, une chambre individuelle : 2 500 yuans / an.	Carte bancaire Union pay	Les étudiants peuvent payer les dortoirs pour l'année complète dès le début de l'année universitaire
4	Assurance maladie 保险	3 200 yuans / 4 ans	Les étudiants peuvent payer eux- mêmes en ligne via https://www.lxbx.net/ ou le campus peut d'abord facturer et transférer sur le compte bancaire de la compagnie d'assurance	Les étudiants doivent payer avant leur entrée en Chine, car l'assurance doit être valide lorsqu'ils viennent en Chine
5	Examen médical 体检	389,5 yuans pour l'examen physique d'entrée (obligatoire) 150 yuans pour le test de drogue urinaire (si nous en avons besoin) 360 yuans pour le test de drogue via les cheveux (si nous en avons besoin)	En espèces / Alipay / Wechat / Union Pay	Si le matériel d'examen médical d'un étudiant (effectué dans son pays d'origine au cours des six derniers mois) est entièrement conforme aux exigences de la Chine, les frais d'authentification seront supprimés. Cependant, l'élève doit apporter : - les copies originales de tous les rapports médicaux ; - L'original, signé et tamponné du formulaire d'examen physique des étrangers. Si les dossiers médicaux contiennent des éléments manquants ou des documents incomplets, l'étudiant doit subir un nouvel examen.
6	Visa de résident 申请居留签证费用	Moins d'un an : 400 yuans Un à trois ans : 800 yuans Plus de trois ans : 1000 yuans	En espèces/Alipay/Union Pay Alipay est recommandé	Il existe une procédure rapide (permettant d'obtenir le visa avant les congés d'octobre typiquement) coûtant 600 yuans / an

Applications - Eligibility

Eligibility:

- Applicants must be non-chinese citizens with a valid passport and meet the conditions set by the document n° 12 (2020) of Ministry of Education of P.R.China:
 - Applicants whose both or one of parents is a Chinese citizen, having foreign nationality at birth and not having Chinese nationality, must have valid passport or citizenship documents dating from before April 30, 2021
 - Applicants whose both or one of parents is a Chinese citizen, having foreign nationality at birth and not having Chinese nationality, must have proof of residence abroad of at least 2 years between April 30, 2021 & April 30, 2025 (9 months of residence abroad may be considered for 1 year)
- Applicants must have attained a senior high school degree (Baccalauréat)



Applications – How to apply

You are welcome to join ZFAI:

How to apply:

- send a message of interest to zfai@buaa.edu.cn
- The required documents for application are:
 - Transcripts of marks (première and terminale)
 - Curriculum Vitae
 - Letter of motivation
 - Copy of Passport
 - For Applicants whose both or one of parents is a Chinese citizen
 - ✓ Valid passport or citizenships documents dating from before April 30, 2021
 - ✓ Birth certificate and proof of nationality of both parents at applicant's birth time
 - ✓ Proof of residence abroad for at least 2 years between April 30, 2021 and April 30, 2025 (9 months of residence abroad may be considered as one year)

Your application will be studied by an internal committee – Reply before end of May 2025



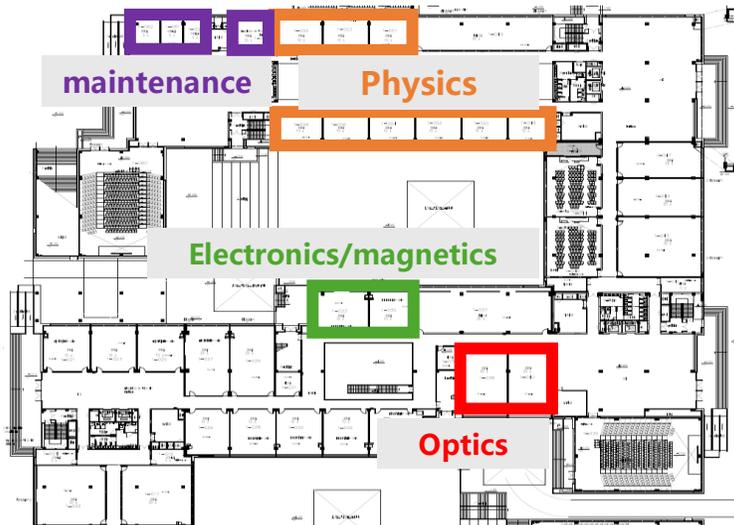
Research and Education Platforms

Physics Laboratory

General Physics | Electronics | Magnetics | Mechanics | Optics



Location:
R1



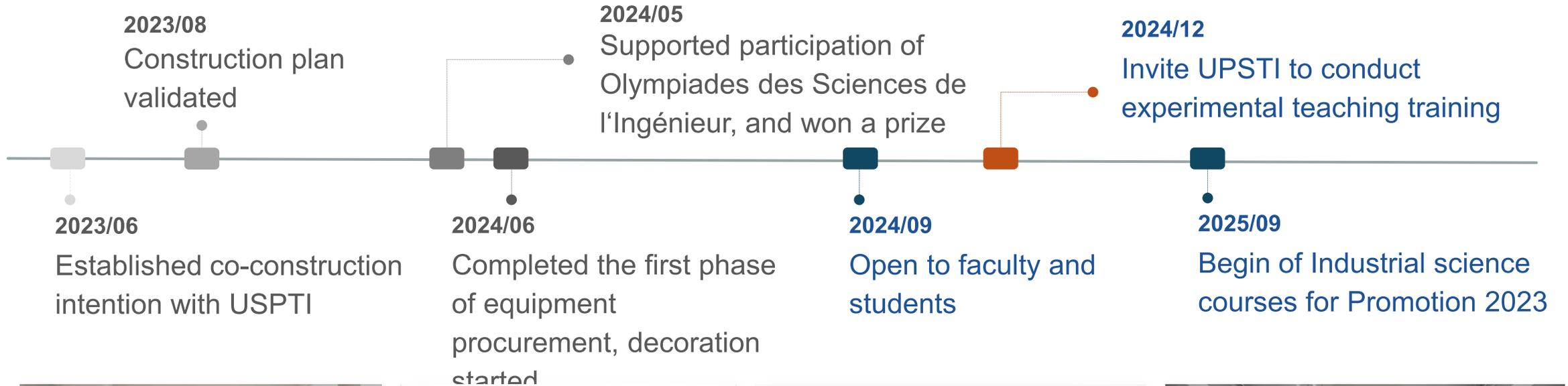
Experiments ready to be conducted in the first operating year:

- Use of basic electronic instruments
- Study of passive filters
- Study of linear circuits of operational amplifiers
- Study of nonlinear circuits of operational amplifiers
- WIEN oscillators
- Amplitude modulators, amplitude demodulators, peak detectors, synchronous detectors
- Relaxation oscillators
- Spectrum analysis



Research and Education Platforms

Laboratory of Industrial Science





Research and Education Platforms

ZFAI-Dassault Education Center of Excellence

SMART AVIATION CENTER (SAC)

A1

SMART
AIRWORTHINESS
CERTIFICATION

A2

SMART
AIRCRAFT
MAINTENANCE

A3

SMART
AIRLINES
PROGRAMMING

A4

SMART
AIR TRAFFIC
CONTROL

A5

SMART
AIRPORT
MANAGEMENT

A6

SMART
LOW-ALTITUDE
TRAFFIC

AI + DASSAULT 3DE PLATFORM



• Work plan

For Undergraduate Students

- Experience courses: design + 3D print
- Practice courses: design an UAV in a group + flying verification



For Postgraduate Students

- Design practice courses: UAV swarm design
- ATM and operation practice courses: operation management



For Company Engineers

- Theoretical courses: MBSE method, FEA method, flight dynamics
- Simulation courses: CATIA, SIMULIA
- Practice courses: Design, airworthiness, reliability, airport management



2023.10.20
Signing MOU with
Dassault China



2023.11.2
Construction Planning



2024.3.21
Start Operating Officially

A network of industrial partners in development



An immersive environment for the development of students

INTERCONNECT

Fireside chats with students by
President WANG Yunpeng and
the INSA delegation



INTERNSHIP

Volunteering opportunities for:
Liangzhu Museum
China National Archives of Publications and Culture
West Railway Station
Asian Olympic Games



INNOVATION

34th FENG RU competition
67 participating projects
1 special prize in creativity sub-group
1 first prize, 4 second prize, 10 third prize

2024 Olympiades des Sciences de l'Ingénieur
3 groups entering the final

1 group awarded "Prix de la Gestion Énergétique" (
WANG Shukai, FENG Sirui, SUN Lin, LUO Chen)



INTERNATIONAL



International Cultural Experience Workshop



Drama club



Singing competition



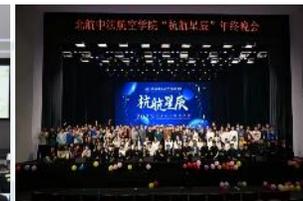
ESCP Exchange



Exchange with HK students



Poetry Knowledge competition



Year-End Gala



RUN festival

Students Activities

Summer Schools oriented towards various research fields

July 10-18: 2024 Digital Twin and Aviation Safety Summer School

Totally **37** students,
22 from foreign countries,
14 from ENAC;
21 PhD students
 from **9** universities.



Totally **12** lecture speakers,
4 professors;
3 senior experts;
 From **4** different countries.
23 volunteers



Visit to Dassault Systemes
 in Shanghai



Liangzhu Heritage Museum



West Lake

24h of Theoretical Courses
12h of Practical Courses
12h of Cultural Workshop

Other Summer Schools to come in the next month:

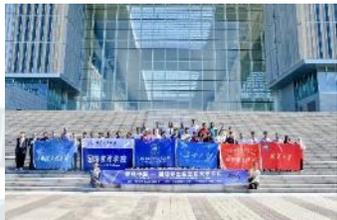
④ Aug. 1-7: Summer School on Quantum Many Body Physics

⑤ Aug.: Advanced Intelligent Technology Summer School

⑥ Aug. 5-20: International Terahertz Summer School

July 4-6: 2024 International Student Aerospace Academic Seminar

29 international students



July 9-21: Summer class at School of Automation Science

34 ZFAI students attending in Beijing





谢谢!
Thank you!

