

2024



联合国附属空间科技教育亚太区域中心(中国)

Regional Centre for Space Science and Technology Education in Asia and the Pacific (China)



MASTA & DOCSTA

Excellence Scholarship Program
Global Navigation Satellite Systems (GNSS)

Admission Announcement



Overview

Space technology and its applications, the most fascinating technical achievement of humanity in the last six decades, have undoubtedly taken great strides forward. The various practical benefits of space technology play a central role in international development efforts.

In order to transform the recommendations of the United Nations Programme on Space Applications (UN-PSA) into practical and operable programme, Beihang University has initiated the Master Programme on Space Technology Applications (MASTA) since 2006. And in 2013, the Doctoral Programme on Space Technology Applications (DOCSTA) was launched.

MASTA is an elaborately designed and intensive Master programme for students who are interested in exploring the mysterious universe. This application-oriented programme focuses on both knowledge acquisition and operational training. While DOCSTA focuses on training participants with solid theoretical knowledge and systematic expertise in the field of space technology applications. MASTA&DOCSTA aim to deliver “International, Interdisciplinary, Intercultural, Innovative, Identical (5I)” education and provide a powerful platform for scholars and professionals to obtain more opportunities for communicating and experiencing the space technology practice in China.

MASTA is designed to give participants a competitive advantage by:

- ★ Broadening their knowledge on space-related issues and activities and encouraging participants to use acquired knowledge and skills through practical, hands-on experience;
- ★ Providing a variety of practice opportunities (including watching satellite launches on site, attending international conferences/workshops, etc.);
- ★ Internationally qualified professors and experts from a diversity of academic backgrounds;
- ★ Modularized curricula design and flexible study modes;
- ★ Developing cross-cultural communication skills in an internationalized atmosphere.

The main educational fields of MASTA Programme include Remote Sensing and Geographic Information System (RS&GIS), Satellite Communications, Global Navigation Satellite Systems (GNSS), Micro-satellite Technology, Space Law and Policy, Space Science and Environment, Space Project Management, etc.

Doctoral Participants are expected to have the ability to conduct the independent scientific research, explore applications or engage in professional careers in related fields.

Candidates are expected to have a profound grasp and understanding of new technology and development in space science technology and applications. They are required to finish the dissertation with high practicability and application prospects.

Lectures are conducted in English. The thesis for project practice is required to be written in English.

Participants will be awarded with the Graduation Certificate of Beihang University and Master's/Doctoral Degree Certificate of the People's Republic of China when fulfilling the required credits and passing the thesis defense.

The faculty consists of professors, experts and senior engineers from Beihang University and some other institutes or academies of China and abroad. The core faculty members have long and varied experience in the field of space science and technology. In addition, they have accumulated considerable teaching experience over the years and are skilled in teaching and advising international students.

For more details, please visit our website:

<http://rcsstep.buaa.edu.cn/kjkjyev/Education.htm>

Beihang University

Beihang University, established in 1952, is the first university in China focusing on aeronautical and astronautical education and research, and one of the "Double First-Class" universities in China.

Beihang implements the “Global Campus Plan” to extend the Beihang campus to all corners of the world and let its students fully enjoy global high-quality educational resources.

For more details, please visit:

<https://ev.buaa.edu.cn>

|| RCSSTEAP (China)

Regional Centre for Space Science and Technology Education in Asia and the Pacific (China) (Affiliated to the United Nations) (RCSSTEAP for short) was established in November 2014. The Centre is located on the main campus of Beihang University, Beijing, China. The Centre, as an education and training entity supported by the Committee on the Peaceful Uses of Outer Space (COPUOS), seeks to contribute to the implementation of “Programme on Space Applications” promoted by COPUOS and to the enhancement of the education and training level as well as application capacity of space science and technology in the Member States of the Centre through capacity building, information communication, training programmes, etc.

For more details, please visit:

http://rcssteap.buaa.edu.cn/kjkjyev/About_us/Introduction.htm

|| Training Mode

MASTA/DOCSTA program is a full-time program. The credit system is applied to postgraduates studying in China, which includes course study, practice and degree thesis. The supervisor shall bear the responsibility of cultivating international postgraduates. The supervisor (group) would be responsible for making the training plan of international students, guiding their thesis proposals, scientific research and thesis writing.

Relying on Beihang’s disciplinary advantages and international academic experience, the Centre recruits teachers globally. The Centre has established extensive cooperation with space industries. A variety of internships and hands-on opportunities are provided to the participants.

For more details, please visit our websites:

MASTA- http://rcssteap.buaa.edu.cn/kjkjyev/Education/MASTA_Program.htm

DOCSTA- http://rcssteap.buaa.edu.cn/kjkjyev/Education/DOCSTA_Program.htm

Qualifications

- ★ Be a citizen of a country other than the People's Republic of China, and be in good health both mentally and physically;
- ★ Comply with the laws and regulations of the People's Republic of China and Beihang University rules;
- ★ Be a bachelor's degree holder under the age of 35 when applying for MASTA;
- ★ Be a master's degree holder under the age of 40 when applying for DOCSTA;
- ★ Applicants should have some professional experience working in space technology industry or research institutes;
- ★ Applicants are expected to have relevant English proficiency certificates, have good command of English and the ability to take courses in English;
- ★ Applicants are supposed to have research background in relevant areas.

Please notice: We warmly welcome the applicants with Bachelors' Degree obtained from the QS World University Rankings Top 500, or from ARWU Top 500 universities.

Applicants are mostly recommended by organizations. Students who are interested to do self-sponsor, please visit website (<http://admission.buaa.edu.cn>) for further information.

Fees

- ★ Application Fee: CNY 400
- ★ Tuition Fees: CNY 35000/year for MASTA, CNY 42000/year for DOCSTA
- ★ Medical Insurance: CNY 800/year
- ★ Accommodation: Double-bed room, CNY 750-900/month/per bed (not including costs like water, electricity, etc.)

Note: MASTA/DOCSTA programme is mainly for directional enrollment. Students who are interested to do self-sponsor, please visit website (<http://admission.buaa.edu.cn>) for further information.

Scholarship

1. Applicants are welcomed to apply for the Chinese Government Scholarship (CSC Scholarship) at Beihang University.

The Full Scholarship of CSC will cover the following items:

- ★ Tuition fees
- ★ Free university dormitory or accommodation subsidy
- ★ Stipend: MASTA students: CNY 3000/month; DOCSTA students: CNY 3500/month
- ★ Comprehensive medical insurance

The scholarship does not contain:

- International travel expenses

2. Applicants who fail to get the CSC Scholarship will have chance to get Beijing Municipal/Beihang Scholarship. **Beijing Municipal/Beihang Scholarship will only cover tuition fee.**

Required Documents

1. Application Form for Chinese Government Scholarship.
2. Copy of Passport Home Page. If the validity of the applicant's current passport does not meet the requirement (meaning the passport expires before September 2024), please apply for a new passport before submitting the application.
3. Notarized highest diploma. Prospective diploma winners must submit official proof of student status by their current school. Documents in languages other than Chinese or English must be attached with notarized Chinese or English translations.

4. Academic transcripts (from the undergraduate program onwards). Copies of academic records from first to last semester during the undergraduate, graduate (if any) shall be provided. These transcripts shall be issued and sealed by the attending university's academic affairs office, graduate school, or student management department. They can be in Chinese or English, but must be attached with notarized English translations if they are in foreign languages other than English.

5. Language qualification certificates. Applicants shall provide relevant English proficiency certificates. The minimum scores for different English tests are: IELTS 6.0 Academic, TOEFL 90, or Duolingo 105, within 2 years. It is recommended to submit GRE scores at the same time (if any).

6. Acceptance letter. All the applicants should provide this document in principle. When submitting online, please upload this document in the "**Pre-admission Letter**" column as one of "Supporting Documents" in Chinese Government Scholarship Information System (CSC) (<http://studyinchina.csc.edu.cn/>). Please use the format we provide.

7. A study plan proposal. A study plan written in Chinese or English shall contain more than 1,000 characters or words; the proposal of a doctoral student shall be signed by the applicant's Chinese supervisor.

8. Recommendation letters. Two letters of recommendation (written only in Chinese or English) from professors or associate professors shall be submitted. These letters shall describe the applicant's objectives of learning in China, comprehensive abilities, and evaluation of future growth, as well as the cooperation between the supervisors or the exchange between universities both in China and abroad. Please note that the recommendation letter is not limited to the format, but the applicant must be recommended from the following three aspects: 1) evaluation of the applicant's academic ability; 2) Evaluation of the applicant's scientific research ability; 3) Identification of the applicant's cultivation potential.

9. A photocopy of the Foreigner Physical Examination Form completed in English (the original copy shall be kept by the applicant). The form is designed by the Chinese quarantine authority and can be obtained from the dispatching authority. The physical examinations must cover all the items listed in the Foreigner Physical Examination

Form. Incomplete records or those without the final suggestion or signature of the attending physician, the official stamp of the hospital, or a sealed photograph of the applicants are invalid. Please select the appropriate time to take a physical examination as the result is valid for only 6 months.

10. Non-criminal record report. The applicant shall submit a valid certificate of Non-Criminal Record issued by the local public security authority, usually issued within 6 months prior to the submission date of the application.

11. Integrity Commitment letter.

12. Resume (if the study or work experience is not continuous, please attach an explanation).

13. The List of Application Documents and Post Address confirmed.

Visit <http://is.buaa.edu.cn/en/info/1416/2882.htm> to access the templates of relevant application materials.

Please notice:

-Uploaded supporting documents must be clear, authentic, and valid. Applicants are recommended to use a professional device to scan the relevant documents. Applicants shall bear the consequences caused by unclear or unidentifiable uploaded materials.

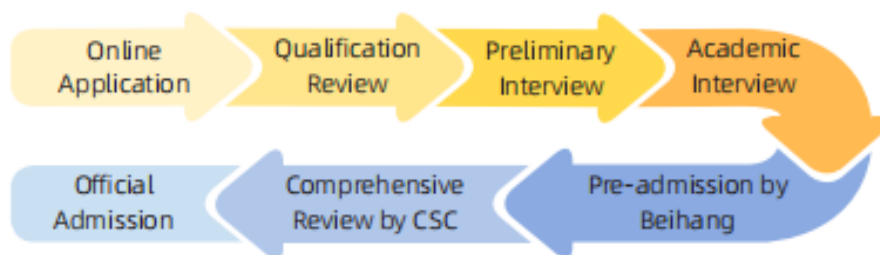
-Documents should be in English or Chinese or attached with translations in English or Chinese.

-Your document review process will only start after your application fee receipt submitted in the system or you have successfully paid in the application system directly.

-If there are any authenticity issues with your application materials, your application qualification will be canceled immediately.

Application and Admission Procedures

- ★ All applicants shall submit your application in both Chinese Government Scholarship Information System (<https://studyinchina.csc.edu.cn/>) and Beihang International Student Online Application System (<https://admission.buaa.edu.cn>).
- ★ Applicants shall be careful with your choice for the correct Program Category "TYPE B" and accurate Agency Number for Beihang University "10006" in Chinese Government Scholarship Information System.
- ★ Please note that the specialty should be chosen as "Space Technology Applications" and the instruction language should be chosen as "English".
- ★ Beihang will organize qualification review, preliminary interview, and academic review. Interview will be online, through ZOOM or Tencent meeting platform. The best candidates will be recommended according to the comprehensive evaluation processes and results.
- ★ Beihang University shall submit the recommended candidates list and their application documents to the CSC; the CSC will organize designated experts to examine applicants' eligibility and academic performance, select and finalize the short-list candidates.
- ★ The admission notices and relevant documents will be sent to the successful candidates via e-mail or express delivery.



Please notice:

-Please ensure that the application information submitted and the documents uploaded in the two systems are consistent. Otherwise, your application will be treated as invalid and incomplete.

-The application progress and admission results and other relevant notices will be released in stages through Beihang International Student Online Application System (<https://admission.buaa.edu.cn>) and the email box you filled in when applying. Please log on the website, application system and email box regularly to stay up to date.

-Beihang university never authorize any intermediary agency to carry out scholarship enrollment. Please do not trust paid services and false promises from intermediaries.

-Hard copies of the documents are not required .

For more information, please visit the official website of "Study at Beihang"-Chinese Government Scholarship-High-level Postgraduates Program at Beihang University:

https://is.buaa.edu.cn/en/jxj/cgs_hlppbh.htm

How to pay the application fee

Application fee: CNY 400 or USD \$70

There are two options for your payment.

1. You pay the application fee through the PAYEASE online payment function in the application system.

2. You pay the application fee by bank remittance service.

Beneficiary info for Application Fee

For USD

Beneficiary Name: BEIHANG UNIVERSITY

Account No.: 0200006209026400229

Beneficiary Banker's Name: Industrial and Commercial Bank of China, Beijing Dongsheng Road Branch, Beijing, China

Swift Code: ICBKCNBJBJM

For CNY

账户名: 北京航空航天大学

账号: 0200006209026400229

收款行: 中国工商银行北京分行东升路支行

Please notice

- Application Fee paid via WeChat/ Alipay/ PayPal or in cash will not be accepted.

- If you pay by bank remittance, please write down applicant's name and passport information on the receipt before you submit it into application system.

- Please double check by yourself if you need to pay the application fee or not in advance. Payment is not refundable.

- Beihang fresh graduates do NOT need to pay the application fee.

Application Period

- ★ Application Start Date: Dec. 10, 2023
- ★ Application Deadline: **Feb. 29, 2024**
- ★ Applicants are suggested to submit online application including required application documents as early as possible due to the limited scholarship quotas. **Any online Application later than Feb. 29, 2024 will not be accepted.**
- ★ The programme will start in **early September 2024.**

Scholarship Period

CSC scholarship for MASTA program is 2 years, for DOCSTA is 4 years.

Contact Information

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- ★ **Website of RCSSTEAP:** <http://rcssteap.buaa.edu.cn>
- ★ **Website of International School, Beihang University:** <http://is.buaa.edu.cn>
- ★ **Website of Beihang University:** <http://ev.buaa.edu.cn>
- ★ **Website of China Scholarship Council:** <http://studyinchina.csc.edu.cn>
- ★ **Beihang International Student Online Application System:** <https://admission.buaa.edu.cn>

Global Navigation Satellite Systems (GNSS)

Global Navigation Satellite Systems (GNSS) provides positioning, navigation and timing services for the whole world. China's BDS-3 Navigation Satellite System was officially commissioned in 2020. BDS products have been exported to over 120 countries and regions, serving hundreds of millions of users. Navigation satellites are the most important national spatial information infrastructure in modern social life and military affairs. Together with communications, remote sensing, big data and artificial intelligence, they would serve people in many areas, such as global personal communications, intelligent transportation, disaster prevention and mitigation, emergency response, automatic driving, precision agriculture and high precision timing.

Teaching emphasizes both hands-on experience and exploration of fundamental concepts and methods. Theoretical and practical courses are conducted to enable students to master the GNSS principle, receiver design, augmentation systems and high precision applications. As a bridge between theoretical teaching and hardware experiments, virtual simulation platform has been developed to support BDS/GNSS satellite orbit design, signal design, signal processing and navigation application virtual simulation experiments, thus to improve the teaching visualization while enhancing student experience.

Based on good partnership with Chinese leading enterprises in the domestic satellite navigation industry, such as Beijing BDStar Navigation Technology Co., Ltd., Shanghai HuaCe Navigation Technology Co., Ltd., Beijing UniStrong Technology Co., Ltd. etc, a wide range of practice base has been established. Extensive outreach activities, internships, and research collaborations will ensure students understand an industry layout from core technology, components, terminal equipment, solutions to service platforms, and gain insights into real-world problems and applications.

The program also provides opportunities for students to keep track of the frontier technology related to GNSS. To meet the development and application needs of GNSS, 5G/6G communication, low earth orbit satellite internet, internet of vehicles (IoV) and internet of things (IoT), research on high performance signal processing algorithm, anti-jamming/anti-deception algorithm, integrated PNT technology are involved.

This program is designed to provide students with the theoretical background and sufficient practical skills to start or advance their careers in GNSS applications.

Beijing BDStar Navigation Technology Co., Ltd. is the first listed company in Chinese satellite navigation industry. It specializes in chips and data services, navigation positioning products and microwave ceramic devices, providing global users with highly reliable and high-precision positioning products, solutions and services.

Shanghai HuaCe Navigation Technology Co., Ltd., one of the in the domestic high-precision navigation and positioning industry, focuses on high-precision navigation and positioning core technologies, chip technology platforms and service platforms, serving over 100 countries and regions worldwide. Its Beidou high-precision positioning equipment has reached the summit of Mount Everest.

Beijing UniStrong Technology Co., Ltd. is one of the earliest companies in China to enter the field of satellite navigation. It has achieved an industrial layout from core technology, board components, terminal equipment, solutions to service platforms, covering major directions such as high-precision, spatiotemporal IoT, and intelligent manufacturing.

9-month Course List for MASTA

No.	Item	Class Hrs	Credits	Remark
Module I Platform Courses				
PC1-1	Probability and Statistics in Engineering	48	3	Select one of them. Compulsory
PC1-2	Theory of Matrix	48	3	
PC1-3	Numerical Analysis	48	3	
PC3-1	Space Technology Application and International Cooperation	18	1	Compulsory
PC4-1	Chinese (level 1)	60	2	Compulsory
PC4-2	Chinese (level 2)	60	1	Compulsory

Module I Platform Courses				
PC4-3	Introduction to China	16	1	Compulsory
PC5-1	Scientific Literature Retrieval	16	1	Compulsory
Module II General Courses				
GC1-1	Wireless Communications	16	1	Compulsory
GC1-2	Principle of Global Navigation Satellite Systems	32	2	Compulsory
Module III Major Courses				
MC2-1	GNSS Receiver Principles and Design	32	2	Compulsory
MC2-2	GNSS/INS Integration Navigation	16	1	Compulsory
MC2-3	GNSS Augmentation System and its Application	32	2	Compulsory
MC2-4	High Precision PNT Technology and Application	32	2	Compulsory
MC2-5	Ionosphere and Space Weather	16	1	Compulsory
MC2-6	GNSS Experiment	16	1	Compulsory
Module IV Practice Courses				
PPC-1	Team Pilot Project	2 months	6	Compulsory
PPC-2	Space Technology Application Professional Practice	16	1	Compulsory

|| Professionals/Experts

Please visit: http://rcssteap.buaa.edu.cn/kjkjyev/Education/Faculty____Staff/Faculty.htm

|| Partners

Please visit: <http://rcssteap.buaa.edu.cn/kjkjyev/Cooperation/Partners.htm>

|| Facilities

Please visit: http://rcssteap.buaa.edu.cn/kjkjyev/Life_at_RCSSTEAP/Facilities.htm

