



北京航空航天大学
BEIHANG UNIVERSITY

Excellence Scholarship Program

GNSS and RS&GIS



MASTA&DOCSTA
Admission Announcement **2023**

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 (°I)” 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://rcssteap.buaa.edu.cn/kjkjyev/Education.htm>

Beihang University

Beihang University (previously known as Beijing University of Aeronautics and Astronautics) was founded on October 20, 1952 under the name of Beijing Institute of Aeronautics, originating from the merger of the aeronautical departments of Tsinghua University, Beiyang University, Xiamen University, Sichuan University, etc. Located in the center of the Zhongguancun Science Park and within easy reach of central Beijing, Beihang is the first university in China focusing on aeronautical and astronautical education and research. About 26km away from the main campus, the suburban Shahe campus provides quiet study milieu and is also home to the National Laboratory of Aeronautics and Astronautics (NLAA). The very new Doudian campus aims at research and innovation through engineering combined with medicine.

For more details, please visit: <https://ev.buaa.edu.cn>

Training Mode

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) should be responsible for making the training plan of international students, guiding their thesis proposals, scientific research and thesis writing.

No changing in major or supervisor is permitted after three months since the registration unless there is a special reason.

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 30 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 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 100, or from ARWU Top 100 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: 400 CNY
- ❖ Tuition Fees: 30000 CNY/year for MASTA, 42000 CNY/year for DOCSTA
- ❖ Insurance: 800 CNY/year
- ❖ Accommodation: Double-bed room, 700 CNY/month; per bed (not including costs like water, electricity, etc.)

Note: MASTA 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
- ❖ Accommodation
- ❖ Living allowance
- ❖ Comprehensive insurance

The scholarship does not contain:

- International travel expenses

٢. 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

١. Application Form for Chinese Government Scholarship (in Chinese or English).
٢. 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.
٣. 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.
٤. A study plan proposal. A study plan written in Chinese or English shall contain more than ١,٠٠٠ characters or words; the proposal of a doctoral student shall be signed by the applicant's Chinese supervisor.

[Attachment ١-Study Plan.pdf](#)

٥. 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: ١) evaluation of the applicant's academic ability; ٢) Evaluation of the applicant's scientific research ability; ٣) Identification of the applicant's cultivation potential.
٦. Language qualification certificates. Applicants shall provide relevant English proficiency certificates. The minimum score for different English tests are: IELTS ٦.٠ Academic, TOEFL ٩٠, Duolingo ١٠٥, within ٢ years. It is recommended to submit GRE scores at the same time (if any).
٧. 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 ٦

months.

[Attachment ୧-Foreigner Physical Examination Form.pdf](#)

୧. Acceptance letter. All the applicants should provide this document in principle. Please use the format we provide.

[Attachment ୨- Acceptance Letter.pdf](#)

୨. 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 ୨୦୨୩), please apply for a new passport before submitting the application.
୩. Resume (if the study or work experience is not continuous, please attach an explanation).
୪. Integrity Commitment letter.

[Attachment ୩-Integrity Commitment Letter-template.pdf](#)

୫. 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 ୩ months prior to the submission date of the application.

[Attachment ୪-Non-criminal Record Affirmation.pdf](#)

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

[Attachment ୫- List of Application Documents.doc](#)

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.

How to apply

- ✦ You must complete your application in BOTH Beihang and CSC systems. Please ensure that the documents uploaded in the two systems are consistent. Otherwise, your application will be treated as invalid and incomplete.

- ❖ Applicants shall follow the instructions below to execute your application process, please be careful to select the correct Program Category “TYPE B” and accurate Agency Number for Beihang University “10006” in CSC system.
- ❖ Please note that the specialty should be chosen as “Space Technology Applications” and the instruction language should be chosen as “English”.
- ❖ Application Period : Oct. 20, 2022 to Jan. 30, 2023,
-Applications received later than Jan. 30, 2023 will not be accepted.
-Applicants are suggested to submit online application as early as possible due to the limited scholarship quotas.
- ❖ All applicants shall submit your application in both Beihang University International Students Online Application System and CSC official system. Links are as below:
-Beihang International Student Online Application System: <http://admission.buaa.edu.cn>
-CSC system: <http://studyinchina.csc.edu.cn>
- ❖ Beihang will organize document review, preliminary interview, and academic interview in different batches. Interview will be online, through ZOOM or Tencent meeting platform. The best candidates will be selected according to the comprehensive evaluation processes and results. Once the applicant is recommended, his or her major shall not be changed.
- ❖ 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 by Beihang University to the successful candidates via e-mail or express delivery.

Please notice:

- Beihang university never authorize any intermediary agency to carry out scholarship enrollment. Please do not trust paid services and false promises from intermediaries.
- Hard copy of the documents are not required in the application 2023.

How to pay the application fee

Application fee: RMB 400 Yuan 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 RMB

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.
- APSCO will reimburse the **400 CNY application fee to applicant who finally complete the registration.**

Application Period

- ✦ Applicants are suggested to submit online application including required application documents as early as possible due to the limited scholarship quotas.
- ✦ Applications received later than **Jan. 30, 2023** will not be accepted.
- ✦ The programme will start in **early September 2023**.

Scholarship Period

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

Contact Information

APSCO:

- ✦ Ms. Charis Xiong,
Address: ASIA-PACIFIC SPACE COOPERATION ORGANIZATION (APSCO)
Building 13&14, Section 2, No.111, South Street Fourth Ring, Fengtai District,

Beijing, China

- ✧ **Telephone:** +86-10-63702677-404
- ✧ **E-mail:** charis@apsco.int
- ✧ **Website of APSCO:** <http://www.apsco.int>

Beihang:

- ✧ Ms. Guo Yuanyuan, Ms. Tang Qian
- ✧ **Telephone:** +86-10-82339734, +86-10-82316190
- ✧ **E-mail:** masta@buaa.edu.cn
- ✧ **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>
- ✧ You may find more details and FAQ via <https://is.buaa.edu.cn/en/info/1416/2692.htm>

GNSS and RS&GIS

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, entering a new era for the benefit of mankind. BDS-related products have been exported to over 120 countries and regions, serving hundreds of millions of users. Communications and navigation satellites are the most important national spatial information infrastructure in modern social life and military affairs. They would serve people together with Remote Sensing and Geographical Information System in many areas, such as global personal communications, disaster management, emergency response, landing, aviation and maritime transportation, etc.

Remote sensing is the science of obtaining information about objects or areas from a distance, typically from aircraft or satellites, and it is a field that deals with acquiring, interpreting, and analyzing remotely sensed. GIS is a computer-based tool for mapping and analyzing feature events on earth, which makes it possible to effectively manage diverse data, facilitating many different types of analysis and modeling, and is now accelerating towards the exploitation of Big Data. The potential of remote sensing techniques, coupled with GIS, are widely recognized as supporting tools for planning, monitoring, and managing the appropriate utilization of resources at the country, regional and global levels.

Teaching emphasizes both hands-on experience and exploration of fundamental concepts and methods, and outreach activities, internships, and research collaborations will ensure students gain insights into real-world problems and applications. It is designed to provide students with the theoretical background and sufficient practical skills to start or advance their careers in GNSS and RSGIS applications.

9-month Course List for MASTA

No.	Item	Class Hrs	Credits	Remark
Module I Platform Courses				
PC ¹ -1	Probability and Statistics in Engineering	48	3	Select one of them. Compulsory
PC ¹ -2	Theory of Matrix	48	3	
PC ¹ -3	Numerical Analysis	48	3	
PC ² -1	Matlab Programming	32	2	Optional
PC ³ -1	Space Environment, Orbit and Spacecraft Systems	16	1	Compulsory
PC ³ -2	Introduction to Space Technology Applications	16	1	Compulsory
PC ³ -3	International Cooperation in the Peaceful Uses of Outer Space	16	1	Compulsory
PC ⁴ -1	Chinese (level 1)	60	2	Compulsory
PC ⁴ -2	Chinese (level 2)	60	1	Compulsory
PC ⁴ -3	Introduction to China	16	1	Compulsory
PC ⁰ -1	Scientific Literature Retrieval	16	1	Compulsory
Module II General Courses				
GC ¹ -1	Wireless Communications	32	2	Compulsory
GC ¹ -2	Principle of Global Navigation Satellite Systems	32	2	Compulsory
GC ¹ -3	Remote Sensing Principles and Methods	32	2	Compulsory
Module III Major Courses				
MC ¹ -1	Physical Principles of Microwave Remote Sensing	32	2	Compulsory
MC ¹ -2	Geographic Information System: Design and Practice	18	1	Compulsory
MC ¹ -3	Natural Disaster Remote Sensing	18	1	Compulsory
MC ¹ -4	Case Studies in the Applications of RS & GIS	32	2	Compulsory
MC ² -1	GNSS Receiver Principles and Design	32	2	Compulsory
MC ² -2	GNSS/INS Integration Navigation	16	1	Compulsory
MC ² -3	Satellite Navigation Data Processing	32	2	Compulsory
Select at least 2 credits from module III				
Module IV Practice Courses				
PPC-1	Team Pilot Project	2 months	2	Compulsory
PPC-2	Academic Lectures	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