Post-graduate study on Nano-Satellite Technologies (PNST) 2024 round



#AccSpace4All

UNITED NATIONS Office for Outer Space Affairs



MINISTRY OF EDUCATION, CULTURE, SPORTS, SCIENCE AND TECHNOLOGY-JAPAN





Access to Space for All Structure of the initiative



The goal of the Access to Space 4 All initiative is to provide research and orbital opportunities for UN Member States **to access space and to ensure that the benefits of space, in particular for sustainable development, are truly accessible to all**



Acquire cutting-edge skills for jobs and other opportunities and develop hands-on capabilities from A-Z



Free of charge access to unique ground and space infrastructure, technology, and information



Gain international cooperation experience through working with the UN and space-faring partners



Visibility to the R&D and space activities already done in the country/region



Motivate the young generation and boost interest in STEM

Access to Space for All in Numbers

- 9 Hands on Opportunities
- **1** Annual Fellowship
- **32** Awardees involving **44** Entities from **32** countries
- 5 CubeSats launched
- 8 Microgravity & 3 Hypergravity Experiments performed
- **16** projects in development
- 68 Scholarships granted
- **100+** Hours of educational content on YouTube







SPACE AGENCIES





م برا متعد بن رائلد بنا مد مد الم



ESEARCH INSTITUTIONS AND UNIVERSITIES







PRIVATE SECTOR



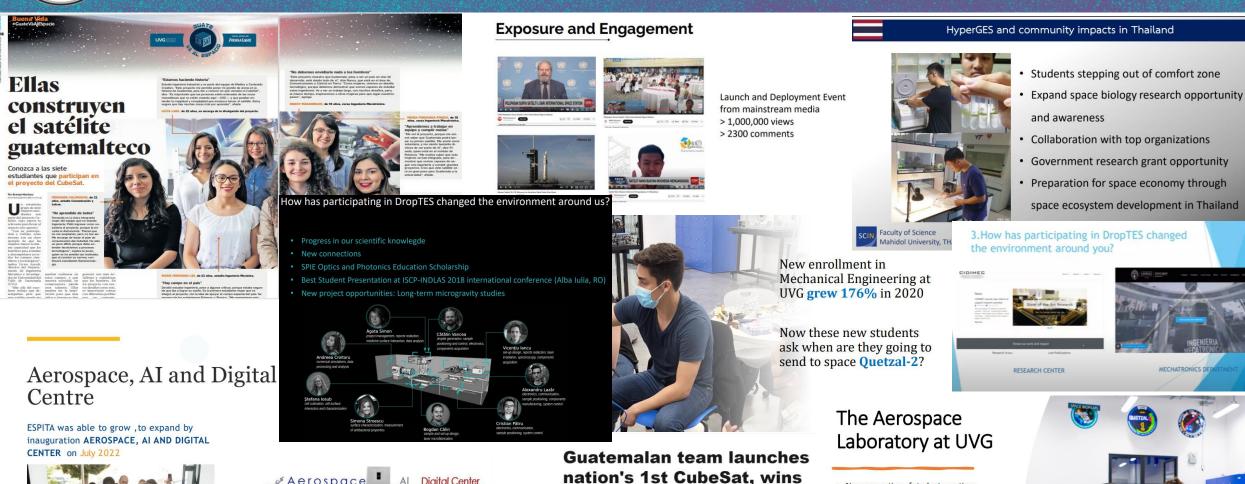






Access to Space for All Impact of the initiative









nation's 1st CubeSat, wins **Interplanetary Initiative** prize

International student team recognized for its success through adversity

¥ f in June 6 2022

When members of the team that built the Quetzal-1 CubeSat watched their satellite take off on a SpaceX Falcon 9 rocket in 2020, it was the culmination of six years of hard work, overcoming financial and personnel burdles and challenging cultural barriers.

 New generation of students continue working on developing technologies for CubeSats in the aerospace laboratory at UVG

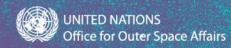
 The laboratory receives continuous visits from schools

- experiment launched in Artemis I
- Space Biofilms

· Other space missions: DSRG: pieces manufactured for this



Awardees



DropTES



- 2014 German Jordanian University, Jordan
- 2015 Universidad Católica Boliviana "San Pablo", Bolivia
- e
- **2016** Instituto Tecnólogico de Costa Rica, Universidad de Costa Rica, Costa Rica
- 2017 Warsaw University of Technology
- **2018** University of Bucharest and Politehnica University of Bucharest, Romania
- 2019 Politecnico de Milano "Polimi", Italy
- 2020 Universidad Católica Boliviana "San Pablo", Bolivia
- **2023** Universidad de Antioquia, Colombia

HyperGES

2020 Mahidol University, Thailand





2023 Macau University of Science and Technology

2023 Universidad Católica Boliviana "San Pablo"

Bartolomeo

2021 A consortium composed of Egyptian Space Agency, Kenya Space Agency, and Uganda National Space Programme



- **2022** Antarikchya Prathistan, Nepal
- **2022** National Space Science Agency, Bahrain

KiboCUBE



- 2015 University of Nairobi, Kenya
- **2016** Universidad del Valle de Guatemala
- **2017** Mauritius Research and Innovation Council
- **2018** Surya University, Indonesia
- **2019** Technical University, Moldova
- **2020** Central American Integration System (SICA)
- **2022** Universidad Popular Autónoma del Estado de Puebla, México
- **2022** École Supérieure Privée d'Ingénierie et de Technologie Appliquée, Tunisia



2019 9 proposals were selected initially. 7 projects from 17 institutions from 13 different countries are under development: China, Germany, India, Italy, Japan, Kenya, Mexico, Peru, Poland, Russia, Saudi Arabia, Spain, Switzerland



2023 University of Nairobi, Kenya, supported by the University of Arizona and Space Trust





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Access to Space for All Structure of the initiative



HYPERGRAVITY AND MICROGRAVITY

Building capacity for conducting experiments in orbit



Hands-on opportunities in hypergravity and microgravity from ground to orbit



Open source tools bridging hands-on and education components



Educational material for building up experiments

SATELLITE DEVELOPMENT

Building capacity that enables the development, deployment, and operation of satellites



Hands-on opportunities for satellite deployment



Open source tools bridging hands-on and education components



Educational material supporting the whole life-cycle of satellites

SPACE EXPLORATION

Broadening the engagement in space exploration



Hands-on opportunities to engage in space exploration



Open source tools bridging hands-on and education components

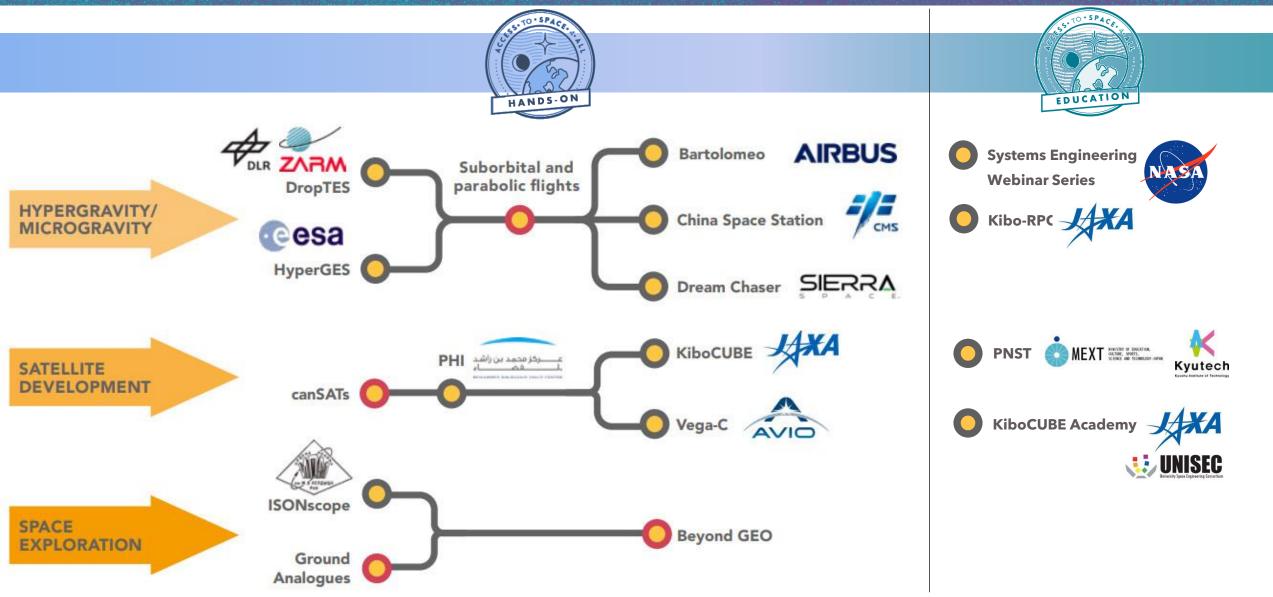


Educational material for space exploration



Access to Space for All Opportunities







Post-graduate Study on Nano-Satellite Technology (PNST)

- Partner: Kyutech (Kyushu Institute of Technology) with the support of the Gov. of Japan (MEXT)
- Established: 2013
- Provides 3 students in the Master's Programme (2 years duration) and 3 students in the Doctoral Programme (3 years duration) to enroll in Kyutech's Space Engineering International Course (SEIC) for a hands-on, extensive research opportunity in nano-satellite systems through the use of the nano-satellite development and testing facilities available at Kyutech.
- The selected fellows are expected to return to their home counties upon completion of their studies and contribute to their countries using the experience and knowledge gained from the programme.



Photo credit: Kyutech









Post-graduate Study on Nano-Satellite Technology (PNST)



Why PNST?

<u>1. Opportunity to study in an international environment at</u> <u>a leading university in the field of small satellites</u>



Hands-on, extensive education opportunity in nanosatellite systems through the use of testing facilities available at Kyutech.



From 2018, Kyutech has been reported by Bryce Space and Technology to have launched the **highest number of small satellites** among all academic operators.

2. Generous support from Japan



144,000 JPY per month for the duration of their fellowship study (2 or 3 years) to cover housing, food, local transportation, and other expenses from MEXT



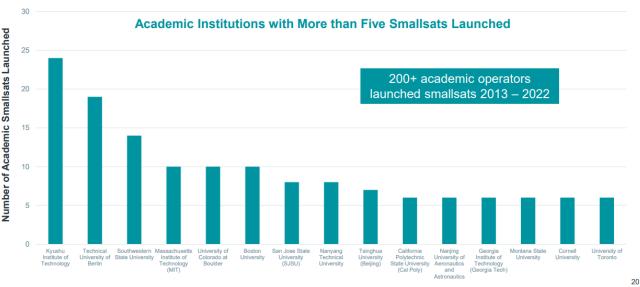
An economy class air ticket between an international airport in the country and Japan from MEXT

Fees for matriculation, tuition and entrance examinations will be paid by Kyutech.

Operator and Mission Type Trends



Number of Academic Smallsats 2013 - 2022, by Institution



Bryce Tech (2023) "Smallsat by the Numbers 2023"



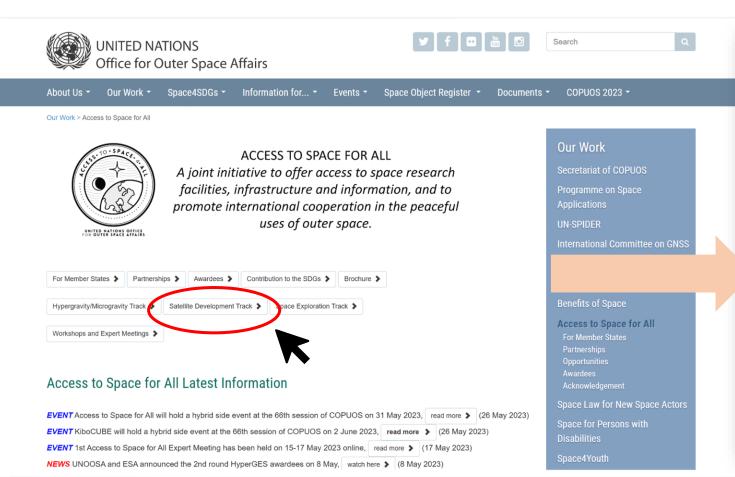
Post-graduate Study on Nano-Satellite Technology (PNST)

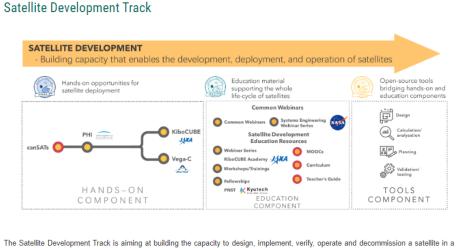




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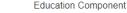
https://www.unoosa.org/oosa/en/ourwork/access2space4all/index.html





responsible and sustainable manner

Hands-on Component





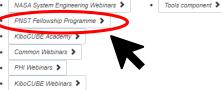
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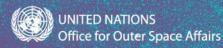




Vega C Webinars 🔰



Post-graduate Study on Nano-Satellite Technology (PNST)



🛩 f 🖽 🛗 UNITED NATIONS Search Office for Outer Space Affairs COPUOS 2024 -About Us -Our Work -Space4SDGs -Information for... -Events -Space Object Register -Documents -Our Work > Access to Space for All > Opportunities > Satellite Development Track AWARDEES INDS PARTNERS Our Work United Nations/Japan Long-term Fellowship Programme Post-graduate study on Nano-Satellite Technologies (PNST) UN-SPIDER International Committee on United Nations/Japan Long-term The very year this PNST accepts up to three Fellowship Programme: Post-graduate udents in the Master's Program (2 years UN-Space Study on Nano-Satellite Technologies uration) and up to three students in the Science and Technology (MEXT) of Japan Space Law (PNST) is provided by the United Nations octoral Program (3 years duration). We and the Kyushu Institute of Technology (Kyutech). Kyutech launched the English-Office for Outer Space Affairs and the ave selected more than 60 students from Benefits of Space Government of Japan in cooperation with I over the world. Read our interviews with based Space Engineering International the Kvushu Institute of Technology the selected students: Fatima Duran from El Course (SEIC) from April 2013, where (Kyutech). The Programme will provide Salvador (selected in 2020) and Pooia students from all over the world learn nanoextensive research opportunities in nano-Lepcha from Bhutan (selected in 2017). satellite design and basic space technology satellite systems through the use of development through SEIC program the nano-satellite development and testing Satellite Development Track facilities available at Kyutech. News i more 🔰 · PNST 2024 round is open for applications. For more information, see Rounds. For Press Release, see here. Space Law for New Space Actors . The Access to Space for All x SDGs Interview Series #2 on PNST is released. Read from here. Space for Persons with ROUNDS AWARDEES PARTNERS Latest Links VIC Online 20 November 2023 Space4Water NEWS ST/SG/SER.E/1148- Registration information from the UNIS Vienna Russian Federation on space objects launched in August 2023 🖌 Kyutech UN-SPIDER 19 October 2023 World Space Forum PUBLICATIONS ST/SPACE/90: The Space4Water Project: United Nations Building bridges for knowledge exchange Terms of Use Worldwide Space Agencies Every year this PNST accepts up to three The United Nations/Japan Long-term This opportunity is in collaboration with th 20 November 2023

place for Persons with Space4Youth MEXT MINISTRY OF EDUCATION. CULTURE, SPORTS. 候 Kyutech This opportunity is in collaboration with the Ministry of Education, Culture, Sports,

World Space Forum Worldwide Space Agencies Capacity Building Activities

read more 🕻

Russian Federation on space objects launched in August 2023

Contact us

United Nations Office for Outer Space Affairs

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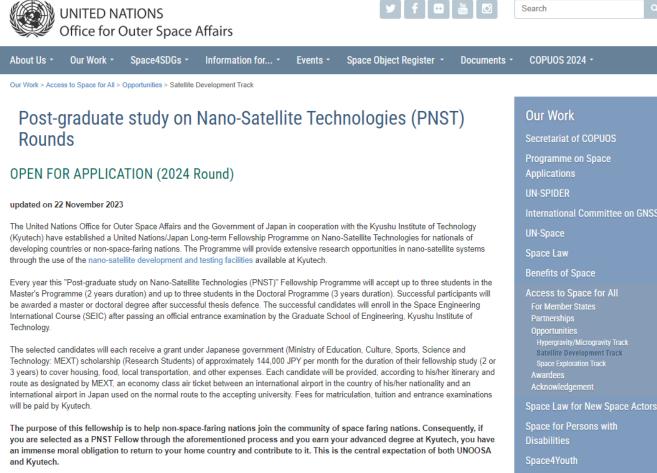
Fax: +43-1-26060-5830

Send us a message!



Post-graduate Study on Nano-Satellite Technology (PNST)





Applications for the Fellowship Programme will be accepted until 5 January 2024 (Friday, 23:59 Japan Standard Time (JST)). If not fully completed at the time of the deadline, the application will be deemed to be not qualifying.

Space4Water

Space4Women

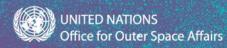
READ this page carefully (especially the FAQ!)



ASK questions in this webinar and if you have any afterwards, address them to unoosa-access-to-space@un.org



Post-graduate Study on Nano-Satellite Technology (PNST)



Application Requirements

Information Note and Application Documents

Before submitting the completed application documents through the online upload-form, please first complete the electronic registration form, using the link below:

<u>Registration for the Post-graduate study on Nano-Satellite Technologies (PNST)</u>

The PNST registration site is using Microsoft services. If you are unable to access the above URL due to restrictions on Microsoft services in your area, please contact PNST Administration: pnst.space [at] mail.kyutech.jp (Replace [at] with @). Please note that the administrative office cannot reply to your inquiries during weekends, and Japanese holidays (from Dec 29 to Jan 3, and Jan 8). If you want to apply, please contact us well in advance.

After registering for PNST you will receive a confirmation email with the web address where you will download the .doc-versions of the application forms.

Application Documents:

- Information Note (.pdf)
- Terms of Participation (.pdf)
- Nomination Form (.pdf)
- Nomination Form (Rank certificate) (.pdf)
- Application Form (.pdf)
- Referee Report Form (.pdf)
- Academic Background (.pdf)
- Academic Background Sample (.pdf)
- Application for Japanese Government (Ministry of Education, Culture, Sports, Science and Technology: MEXT) Scholarship (.pdf)
- Field of Study and Research Plan (.pdf)
- Checklist (.pdf)
- · Application Guidelines of Japanese Government (MEXT) Scholarship (.pdf)

▼ Application Submission Procedure

- The fully completed application form and other required documents except the referee report forms shall be submitted in electronic format (.doc or .pdf or.xls) at the Web address that is in the confirmation e-mail you will receive after registering above, by no later than 5 January 2024 (Friday, 23:59 JST). If not fully completed at the time of the deadline, the application will be deemed to be not qualifying.
- Note: For file a name, do not use any non-English characters. Moreover, each character must be a one-byte type of character. As well, do not use spaces in your file names as the file server will not handle such data correctly. Use "_" (under bar) or "-" (hyphen) instead, e.g. "01_Tom_Smith_2023.12.24".
- The Referee report forms should be sent by uploading to the designated URL by the referees themselves by no later than 5 January 2024 (Friday, 23:59 JST).

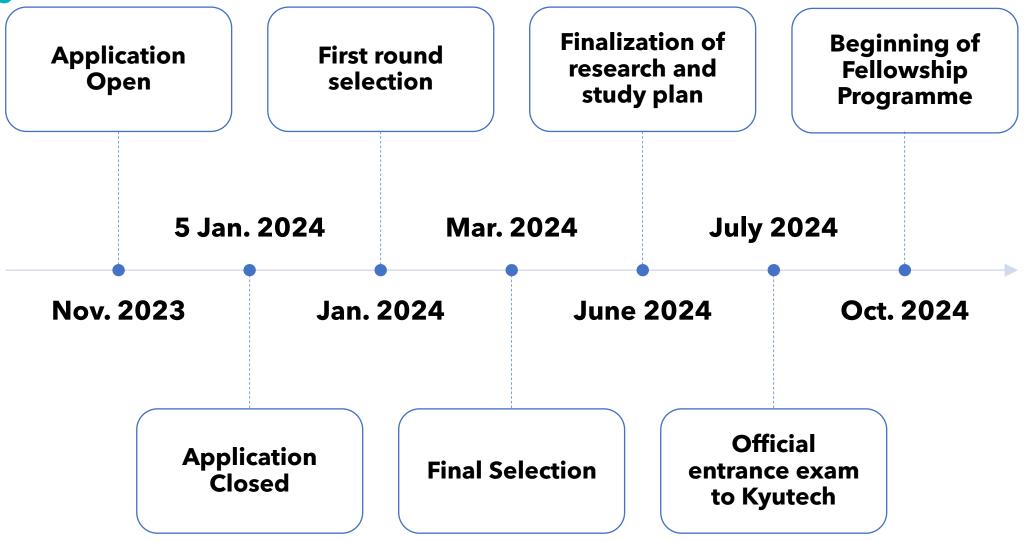
Register from here to get the word version of the documents



Post-graduate Study on Nano-Satellite Technology (PNST)



Schedule





Post-graduate Study on Nano-Satellite Technology (PNST)



Frequently Asked Questions (FAQ)

During the registration process for PNST, if you have any questions, first, please read the Application Flow (PDF) which can be downloaded from https://www.tobata.kyutech.ac.jp/gr-school/gra-program/seic-pnst/

Q: I am expected to graduate sometime in 2024. Am I still eligible to apply for the PNST?

A: We accept applications as long as the applicant is expected to have the degree by September 2024. However, the applicant will need to submit a proof of the expected degree conferral date by the submission deadline; 5 January 2024 (23:59 JST), and if selected, will also have to submit the diploma received before the Fellowship Programme starts on 1 October 2024.

Q: As the topic of my Doctoral or Master thesis, am I restricted to choose something related to nano-satellite?

A: Space technology is made of many disciplines. You do not have to restrict yourself to choosing a topic too narrowly such as "nanosatellite guidance", "nano-satellite communications", etc. As long as the topic is space related, it has a possibility of being applied to nano-satellite. The important thing is that the thesis topic has suitable academic meaning as a Doctoral or Master thesis. Your research topic will be determined via matching between your research interest and the academic disciplines that Kyutech faculty members can offer. We will try to find a supervisor who is able to guide you in the area of your research interest.

Q: Where can I find more information about the research work I could conduct at Kyutech?

A: Please visit http://kyutech-cent.net/seic/seic_web.html which provides information about the research programmes at Kyutech, on the subjects of the Space Engineering International Course and on the faculty members and their recent publications.

You can also find the list of professors who belong to the Department of Space Systems Engineering at https://www.space.tobata.kyutech.ac.jp/lab/list/ . Although the page is in Japanese, you can go to the webpage of each laboratory from the links listed in the page.

Q: After a survey of the different researchers at Kyutech I am interested in working with Dr. XXX. My question is if I can apply to the United Nations/Japan Long-term Fellowship Programme on Nano-Satellite Technologies even though I do not have any agreement with any researcher yet?

A: Yes, of course you can apply! You do not need any pre-agreement with a Kyutech faculty before you apply. After the first round of down-selection, we will work on matching the remaining applicants to a professor at Kyutech. We will consider your interest in working with a particular professor if you pass this first round. Please first register for the PNST programme 2024 and then submit your application package.

Q: Who should sign the "Nomination Form"?

A: The nomination form shall be signed by the head of the nominating organization. If you are a student right now, the person who signs the form has to be the Dean or a higher ranking official. If you are employed by a company, the person who signs the form has to be the president of your company. If you are neither a student nor employed, please ask the Dean or a higher ranking official of the school you attended most recently.

Q: Is it sufficient for the "Referees Report Form" to be signed by the referee or is the seal of the referee's organization also required? A: The referee's signature is sufficient, however, for the "Nomination Form" the official seal of the nominating organization is required.

Q: Is it necessary to send the hardcopies of the application forms to PNST?

A: At the first stage in the application process this is not necessary. You should just upload and submit the softcopies of required documents through the specified website. However, please retain all the original certificates; such as Certificate of graduation (Diplomas) or expectation of graduation, grade certificates (transcripts) and those official translations into English, and official score report of English test (such as TOIEC, TOEFL, etc.), and Nomination Form signed by the head of the nominating agency/institution. The short-listed candidates will be contacted and asked to send those original documents by express mails (such as DHL, FedEx) directly to Kyutech in early February.

Q: Can I send additional certificates to support my application? A: Yes, you can if you think that it will strengthen your application.

Q: I will apply for the Master's Program. Do I have to fill the STATEMENT OF PURPOSE in the PNST 2024_Application Form? A: Yes, please complete this field if you apply for Master's Program as well as if you apply for Doctoral Program.

Q: As an applicant do I need any help from my nominating agency during the application process? How is the nominating agency going to know about the progress in the selection process?

A: It is up to the applicant and the nominating agency how they wish to relate to each other during the application process. For example, some successful applicants have retained employment with their respective nominating agency, retained the possibility to return to their previous employer, or had coordinated the topic of their theses work with their nominating agency. This is handled differently in each case and so it is up to the applicant and the nominating agency how you would like to handle this. It is also up to the applicant to keep the nominating agency informed about the progress in the application and selection process.

Q: Do I need preparation for an examination to Kyutech?

A: You need to register online for admission application in May, and then take an interview as an official entrance examination for Graduate School of Engineering, Kyutech in July. The details for registration will be provided by April from Kyutech. Doctoral Program candidates may be exempted from an interview, whereas Master's Program candidates must undergo an interview. However, as long as the candidates are selected as final PNST candidates, it is unlikely to fail the interview.

Q: Is TOEFL or another English proficiency certification required? If so, what score is required and where should the exam results be sent?

A: Basically, it is advised all the candidates should submit an official English test score taken within two years; such as TOEIC, TOEFL, etc., and the score level should be CEFR (Common European Framework of Reference for Languages) B2 or higher. Please check what tests are approved by CEFR at Wikipedia: https://en.wikipedia.org/wiki/Common_European_Framework_of_Reference_for_Languages

The submission of the test score is not mandatory if your university (Bachelor for Master candidates, Master for Doctoral candidates) education was conducted entirely in English, and you can submit the evidence of that as a certificate signed by Dean or an official of higher rank.

Please refer to the checklist No.08 for the details about certification of English proficiency.