

文部科学省・卓越大学院プログラム

Doctoral Program for World-leading INnovative & Smart

Education

(WISE Program)

生命科学技術国際卓越大学院プログラム

World-leading INnovative Graduate Study Program

for Life Science and Technology (WINGS-LST)



AY2023 Application Guidelines

If any differences in wording or interpretation should occur between the Japanese and English versions of these application guidelines, the Japanese version will take precedence.

These are application guidelines for students hoping to gain a place on the AY2023 integrated master's-doctorate graduate program, "The University of Tokyo World-leading INnovative Graduate Study Program for Life Science and Technology" (Doctoral Program for World-leading Innovative & Smart Education).

## What is WINGS-LST?

### (1) Aim

The World-leading INnovative Graduate Study Program for Life Science and Technology (hereinafter "this program") aims to develop talents who will significantly contribute to human health from a long-term perspective. For this reason, it covers a wide range of Life Science and Technology research fields, from elucidation of basic principles to applied technologies that lead to clinical practice.

In this program, we aim to foster human talents who can create new academic fields in the future by co-developing excellence in three assets: expertise in specialized disciplines, broadness of scientific perspective, and agile engagement with others to develop new opportunities.

### (2) Development of human talents at the frontiers of Life Science and Technology

In this program, we aim to foster human talents at the cutting edge of Life Science and Technology disciplines: we promote *discoveries and elucidation* of mechanistic insights in all phenomena of life using new technologies, while we also develop *novel and advanced technologies* based on scientific principles and theories of life. Innovative areas in academic disciplines and technologies do not arise spontaneously. We believe that they are created by enhancing expertise, broadening perspectives through development of big picture thinking skills and meeting with experts in a variety of fields, and developing interdisciplinary research by engaging others.

**Specialized expertise:** Specialist capability that makes an individual second to none with regard to a particular purpose or area of knowledge.

**Broader perspective:** Based on the expertise above, ability to survey various academic fields and identify fundamental cross-disciplinary problems. Faculty members who will provide guidance to the program students are leaders conducting cutting edge research in their own discipline, while remaining flexible and open to methods and ideas of other fields.

**Agile engagement:** Ability to think about the way research should proceed based on the big picture, and to develop research by building collaborative relationships with researchers in appropriate fields. Communication skills, capacity for understanding, information gathering ability, etc., are also included.

### **(3) Program outline**

A unique feature of this program is that students are able to learn about both the *elucidation* of life phenomena (related to basic medical sciences and life sciences) *using state-of-art technologies*, and the *technologies* (related to clinical practice and engineering) that contribute to human health *based on the elucidated principles and theories*.

Life science has made tremendous progress and has been able to elucidate new phenomena thanks to many technical developments, such as recombinant DNA technologies based on biochemistry or microscopy based on physics. In parallel, new principles have revealed the target molecules for drug discovery, and new treatment techniques have been created. In other words, to elucidate life phenomena and create technologies, an ecosystem where both are performed at the highest level as two halves of a whole is necessary. Therefore, this program aims to promote *knowledge professionals* who can integrate both technology and mechanistic elucidation, as well as contribute to the development of academic disciplines and industries that contribute to human health.

Specifically, in addition to laboratory-based training to build specialized expertise, we conduct multi-disciplinary lectures and exercises that go beyond the existing framework of the Graduate Schools. In particular, we offer lectures and seminars that cover a wide range of basic knowledge on life science, engineering, information technology, etc. Practical training is also provided through laboratory internships in various research laboratories inside and outside the University. Furthermore, lectures and seminars cover the following topics: social implementation; basic regulations on pharmaceuticals, medical devices, and regenerative medicine products; and the basic processes, ethics, and industrialization required for clinical research. In addition, we provide various interdisciplinary programs to actively promote joint research projects across Schools or with collaborators outside the University.

We also offer partnerships and internships with companies, as well as overseas summer internships and collaborative research with overseas research institutes. Progress reviews are undertaken by multiple faculty members to foster research ideas, approaches, and values that differ from those of students' direct supervisors. The formation of networks among students is also important: such networks are likely to prove extremely useful during this program or when creating and developing new scientific fields in the future.

## Autumn AY2023 Application Guidelines for World-leading Innovative Graduate Study Program for Life Science and Technology (WINGS-LST)

### (4) Requirements for enrolling in the WINGS-LST program

In order to apply for this program, students need to satisfy the three requirement categories detailed below: (A) eligible grade, (B) eligible majors, and (C) other requirements. (Check “For Students > FAQ” on the WINGS-LST website)

In addition, you should have a good understanding of the duties and precautions after adopting this program.

#### (A) Eligible grade

Those who belong to the graduate school grade specified in Table 1 below as of May 2023 are eligible for application.

#### (B) Eligible majors

Those who belong to the graduate school majors or research fields shown in Table 1 below as of October 2023.

Table 1. Students eligible for the WINGS-LST program: Autumn 2023

Graduate School	A. Eligible grade as of May 2023	B. Eligible majors as of October 2023
Engineering	[October Enrollment] • Graduate students in 1st year of master’s course [April Enrollment] • Graduate students in 2nd year of master’s course	Bioengineering Mechanical Engineering Electrical Engineering and Information Systems Precision Engineering Materials Engineering Applied Chemistry Chemical System Engineering Chemistry and Biotechnology Nuclear Engineering and Management

#### (C) Other requirements

- 1) Those who aim to acquire a PhD degree in either a basic, applied, or interdisciplinary field of Life Science and Technology contributing to human health.
- 2) Those who are interested in and committed to actively learn about how Life Science and Technology relate to and interact with society and industry.
- 3) Those who aim to become a “knowledge professional”.
- 4) Master’s course students who intend to be enrolled in a PhD program in one of the eligible

majors for this program (including the four-year PhD course in medicine or pharmaceutical sciences). Students who aim to seek employment in a company after completing a master's degree program are not eligible for application in this program.

- 5) Those who have not applied or are not applying for another World-leading Innovative Graduate Study Program (WINGS) or Doctoral Program for World-leading Innovative & Smart Education of the Ministry of Education, Culture, Sports, Science and Technology (WISE) in overlapping review period\* with this application.

\*Review period: from the application deadline to pass/fail announcement

- 6) Those who have adopted in this program have to be enrolled in the WINGS-LST program even after adopted by the Japan Society for the Promotion of Science Research Fellowship for Young Scientists (JSPS DC).
- 7) Those who have applied for and failed the WINGS-LST Program in the past, are not eligible for application.

## **(5) Selection process and notification for AY2023**

### **Schedule**

Early-May 2023:	Program guidance session
Mid-May ~ Late-May 2023:	Application acceptance
Early-June ~ Mid-June 2023:	Student selection
Late-June ~ July 2023:	Announcement of results & enrollment procedure

For the Graduate Schools of Medicine, Pharmaceutical Sciences, and Science, applications for this program are accepted once a year in spring. For the Graduate school of Engineering applications are accepted twice a year, in spring and autumn. However, only one application per student will be accepted. Approximately 40 students will be accepted in total per year.

An on-demand guidance session for the autumn selection cycle of this Program is scheduled for early May. Because the guidance shall be delivered in Japanese, students who may not speak Japanese fluently should be assisted by their tutors.

Please download the necessary documents and files for the application from the WING-LST website. The application period is scheduled from mid-May to late-May. During the application period, applicants must submit the application documents (applicant information, research plan, essay, and research activities), a written Opinion Letter by your current supervisor (or the faculty member due to mentor you) at the University of Tokyo and an additional consent form to refer to an academic transcript and the results of the entrance exam if required, to the WINGS-LST Office as per instructions designated on the website.

Applicants are evaluated in each graduate school based on the application documents, the results of the graduate school entrance examination, graduate school grades, and interview results. Program student selection is then finalized by the academic affairs committee of WINGS-LST.

### Notes on the application

- 1) Any application document that is not completed in full will not be accepted. No deadline extension will be allowed.
- 2) Application documents are not subject to any changes after completion of the submission procedure, under any circumstances.
- 3) Application procedures, etc. are subject to change depending on circumstances. We will notify you of any changes.
- 4) Personal information about applicants such as names or addresses obtained from applications are used only for ① selection, ② announcement of successful applicants, and ③ admissions procedures. In addition, the personal information of students who are enrolled will be used for ① educational affairs and ② student support.
- 5) A person who makes a false statement about the contents of the application form may revoke his or her status as a program student retroactively even after enrollment.

### (6) Contact information

For information on student affairs relating to the WINGS-LST program, please contact the WINGS-LST Office:

Room No. S115 on the ground floor of Faculty of Medicine Building #1.

Email address of the WINGS-LST office: [wings-life@m.u-tokyo.ac.jp](mailto:wings-life@m.u-tokyo.ac.jp)

Phone: 03-5841-0246 (Extension 20246)

Please contact us by email, if possible, as WINGS-LST Office is doing telework.

If you have any questions specific to your department or discipline, please contact your supervisor or the program instructors for your discipline listed below:

Graduate School of Engineering

FUJISAWA Ayano, Project Assistant Professor: [afjsw@g.ecc.u-tokyo.ac.jp](mailto:afjsw@g.ecc.u-tokyo.ac.jp)

## OBLIGATIONS AND CAUTIONS AFTER ENROLLMENT IN THIS PROGRAM

Please note that the following is based on the rules and regulations as of May 2023 and details may change.

### **(7) Requirements for completion and academic degree**

1. In order to complete this program, you are required to take six credits from this program's curriculum including lectures, laboratory practices, and laboratory training sessions during your enrollment in this program. Those credits will not be included in the required credits to obtain your master's or PhD degree. Please note that you may be required to take part in internship research programs provided by this program in Japan or overseas. In addition, as a rule, attendance at intensive seminars provided by the program several times a year is mandatory.
2. Passing of the Qualifying Examination (QE)
3. About one year after your enrollment in this program, you will be asked to submit a research plan for the following three years, which will be reviewed to assess your eligibility to continue your enrollment in this program.
4. You are asked to get periodical progress reviews by several faculty members.  
Please note that, as a rule, you are required to apply for the Japan Society for the Promotion of Science Research Fellowship for Young Scientists (JSPS DC) every year. You are also required to promptly submit a copy of the application to the WINGS-LST Office every year. If you do not qualify for application, submit a research plan or a report equivalent via the application form, as specified under this program.
5. After passing the QE, your supervisor and a mentor selected from a different graduate school will be engaged in a co-mentoring system, to enable you to cultivate the mindset, approach, and set of values of a research field different from that of your supervisor.
6. You are required to meet the requirements for PhD degree completion in your department.
7. You are required to write your dissertation in English and to successfully defend your thesis in your department.
8. You are required to pass a review of your dissertation specific to this program.

Upon satisfaction of all the conditions above, you will be granted a Certificate of Completion from this program, and your PhD diploma will have a statement acknowledging your completion of this program.

### **(8) Financial support for program students**

Program students are entitled to the following financial support from this program upon request, if requirements are met. If you are not receiving the following financial support from this program, please refer to "(9) Program students who do not receive financial support from this program."

If you plan to receive additional support from other sources, you are required to consult the WINGS-

LST Office.

Table 2. Financial support from the WINGS-LST Program

Financial resources	Financial support Plan	Amount	Eligible students	Other conditions
WINGS-LST	Master's course WINGS-LST Takuetsu Research Assistant (Takuetsu RA)	Maximum JPY 80,000 per month	Master's course program students	See Notes
	PhD course WINGS-LST Takuetsu Research Assistant (Takuetsu RA)	Maximum JPY 180,000 per month	PhD course program students	See Notes
	Teaching Assistant (TA)	JPY 1,300/h (master's course) JPY 1,500/h (PhD course)	Program students, mainly for the first year of enrollment	

Notes. Master's course Takuetsu Research Assistant (Takuetsu RA) • PhD course Takuetsu Research Assistant (Takuetsu RA)

- 1) Commission period of Takuetsu RA for master's course is limited to one year, regardless of the enrollment period. For PhD course, the upper limit is within the standard period of study, regardless of the enrollment period.
- 2) The Takuetsu RA Fee is a consideration for research work, and is paid as "salary income" in the month following the research work, after withholding tax.
- 3) In order to be accepted as Takuetsu RA, it is necessary to continue to belong to the program, and to obtain the approval of the supervisor and report to the program on the status of activities every month in the designated form. Financial support may be terminated if the research in the specialized field in the department to which the student belongs and the commitment to the curriculum of this program are insufficient. If there is a plan to conduct the research at another institution, fill out the details (contractor, period of consignment) on the application form in advance. In the case of contracted research guidance, prior approval must be obtained from both the supervisor and the instructor of the contracted research institution when you submit monthly activity status reports.
- 4) In the case of long-term study abroad (more than 3 months) other than the regular program of this program, financial support may not be provided during that period. Be sure to consult with your supervisor and the WINGS-LST Office in advance.



5) Takuetsu RA recipients from this program may not be able to receive scholarships or awards etc. from other financial resources apart from this program. Be sure to consult your supervisor in advance.

**(9) Program students who do not receive financial support from this program**

1. If the students are not receiving financial support from this program due to other scholarships or dependent deduction issues, you will still be able to enroll in this program.
2. Program students who are adopted as JSPS DC will not be able to receive financial support from this program but are required to continue enrollment in this program.