



**“Advanced Human Resource
Development Fellowship”
Guidance**

Tokyo Institute of Technology
2022 Edition

Purpose of this document

This document provides guidance on student obligations and fellowship funds to students hired as Advanced Human Resource Development Doctoral Fellowship in Tokyo Institute of Technology.

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1. Purpose of fellowship program

This fellowship program is to develop doctoral human resources who create science and technology innovation for the implementation of a smart society, based on the concept of Cyber Physical & Social Systems, which the Tokyo Tech has set as one of the strategic fields for leading research in the world.

2. Overview of Funds on this program

- This fellowship provides research dedication support funds and research funds to students hired as Advanced Human Resource Development Fellowship. (hereinafter called “fellowship students”).
- The research dedication support funds is 150,000 yen per a month (1.8 million yen per a year), and the research funds is 300,000 yen per a year at maximum with actual cost payment.
- The fellowship funds are paid up to 3 years from the month of enrollment or advancement to the doctoral program. However, students enrolled in this spring will receive up to 2 years and 6 months.
- Usually the monthly amount of research dedication support funds is transferred to an account specified by the student in the fixed day of payment (the 21st of each month (if that day falls on a holiday, the day before that day which is not a holiday)).
- In case that the research dedication support funds for the month cannot be paid on the payment date, the payment is made on the payment date after that day.
- For the first year, if the selection period overlaps the payment period, the research dedication support funds for several months will be paid at once after the selection.
- The information about research funds will be explained separately.
- All tuition fees will be exempted.

3. Fellowship student obligation

Fellowship students are required to fulfill the following obligation.

- First of all, you focus on research activities based on the research plan
- You implement the items in the next chapter “4. Fellowship Study Program”
- Regarding the status of items above, you submit a report (Form 1 “Report on Advanced Human Resource Development Doctoral Fellowship Study Program, etc.”) twice a year by the specified

deadline (in September 17, 2021 and February 28, 2022 in this year)

- Apply for a Research Fellow (DC2) of the Japan Society for the Promotion of Science at the most recent opportunity.

4. Fellowship study program

The study program of this fellowship is explained below. These programs will help you improve your research skills in the doctoral program and find a future career path that suits you. I look forward to your active participations and execution.

4.1. Research capability

4.1.1. Through a consortium

By participating in joint research projects and research presentations conducted by a consortium which is formed between Tokyo Tech and companies / academic research institutes, you will take practical training to improve the research capability.

4.1.2. Education program

By taking the course "Progressive Graduate Minor in Data Science and Artificial Intelligence", you can enhance the research capability to solve social issues through the CPS2.

4.1.3. Mentoring

You will receive advice by mentoring with academic advisor and supporting academic advisor to improve your research capability. In addition, by participating in a round-table conference with young assistant professors in Institute of Innovative Research Administration Division, you will have basic training to improve research capability (in preparation).

4.1.4. Presentation and technical writing

By taking "Academic Writing" and "Academic Presentation" type of class, you will acquire skill for writing well-structured research thesis in English and for presenting your research achievement.

4.2. Career path

4.2.1. Through a consortium

You think about various career paths by participating in consortiums formed of companies, academic research institutes and other universities. One is "Dr's K-meet" (largest matching event with the companies who have the plan to hire doctoral students in Japan) conducted by Tokyo Tech Alumni Association "KURAMAE KOGYOKAI." We also have career forum with company coordinated by each school.

4.2.2. Research internship

You will participate in "research internships" which is to have the experience of research activities in collaboration with companies and academic research institutes. This enables smooth development from internship to joint research, and seamless career development from Tokyo Tech to companies and academic research institutes. Or, you will participate in individual internship matching, etc. coordinated by the office of fellowship (in preparation).

4.2.3. Education program

Out of the career education courses offered by the Innovation Human Resources Development Organization, you will take a series of well-formed career education for doctoral students. And, through entrepreneurship training for doctors, you will consider the possibility of creating ventures.

4.3. Promotion

By introducing the research activities of each laboratory to students under the master's course, they will be motivated to go on to the doctoral course.

4.4. Detail of study program in each school

In this section, you can see details of study program for each school.

4.4.1. Report form

The following blank forms will be used to make the report of each activity specified in this guide.

- (Form 1) Report for study program on Advanced Human Resource Development Fellowship for Doctoral Students (“Form_1 Report for study program.xlsx”)
- (Form 2) Report on seminar, workshop, learning program and other event (“Form_2 Report on seminar workshop and learning program.xlsx”)
- (Form 3) Counselling report with academic advisor and supporting academic advisor (“Form_3 Counselling report with academic advisor.xlsx”)

4.4.2. School of Science

Item	Action
Research capability	
Through a consortium	Participate in joint research projects with laboratory and other universities, and make the research presentations. [Goal] At least once during the doctoral course [Evidence] Make a report (Form 2)
Education program	Take a series of course "Progressive Graduate Minor in Data Science and Artificial Intelligence" listed in "Reference – List of courses" document. [Goal] 4 of XCO T677-680, 2 from XCO T687-690 and 2 from others [Evidence] Write down the name of courses (Form 1)
Mentoring	<ul style="list-style-type: none"> • Regularly take an interview with two academic advisors [Goal] At least twice a year [Evidence] Make a report (Form 3) or update portfolio system • Participate in the consortium to have information interchange with Assistant Professor in Organization for Fundamental Research (in preparation) [Goal] At least once during the doctoral course [Evidence] Make a report (Form 2)
Presentation and Technical writing	<ul style="list-style-type: none"> • Take the class of English presentation and technical writing listed in "Reference – List of courses" document. • English presentation at a symposium and international conference is also acceptable. [Goal] At least once during the doctoral course [Evidence] Write down the name of courses in the report (Form 1), or make the report (Form 2)
Career path	
Through a consortium	<ul style="list-style-type: none"> • Participate in Dr's K-meet • Participate in a career forum specified by a school [Goal] Any of above, at least once during the doctoral course [Evidence] Make the report (Form 2)
Research internship	<ul style="list-style-type: none"> • Have an assignment at academic research institutes or overseas institutions. • Take internship courses for each graduate major listed in "Reference – List of courses" document. • Participate in individual internship matching, etc. (in preparation). [Goal] Any of above, at least once during the doctoral course [Evidence] Write down the name of courses in the report (Form 1), or make the report (Form 2)
Education program	<ul style="list-style-type: none"> • Take the career courses listed in "Reference – List of courses" document. • Take the courses, "practical artificial intelligence and data science"

	<p>[Goal] Any of above, at least once during the doctoral course</p> <p>[Evidence] Write down the name of courses (Form 1)</p>
Others	
Promotion	<p>Participate in the event like a doctoral study group held in a laboratory, department or graduate major.</p> <p>[Goal] At least once a year</p> <p>[Evidence] Make the report (Form 2)</p>

4.4.3. School of Engineering

Items	Actions
Research capability	
Through a consortium	<p>Participate in a study group or seminar in the following.</p> <ul style="list-style-type: none"> • Project or study group sponsored by the consortium of Tokyo Tech Academy E.g., Matching workshop of Tokyo Tech Academy for Super Smart Society • The joint research projects and research presentations held by the consortium formed between the Tokyo Tech and companies / academic research institutes, those authorized by the department confirming that it contributes to improve the research ability of the doctoral students. Confirm with your academic advisor as the contact point if it is acceptable. (including those by the interdisciplinary graduate majors). • Contest or workshop hosted, sponsored and co-sponsored by school of Engineering which is authorized by the school as it is contributed to improve research capability, e.g., Sustainability challenge contest sponsored by school of engineering <p>[Goal] Any of above, at least once during the doctoral course [Evidence] Make the report (Form 2)</p>
Education program	<p>Take a series of course "Progressive Graduate Minor in Data Science and Artificial Intelligence" listed in "Reference – List of courses" document.</p> <p>[Goal] 4 of XCO T677-680, 2 from XCO T687-690 and 2 from others [Evidence] Write down the name of courses (Form 1)</p>
Mentoring	<ul style="list-style-type: none"> • Regularly take an interview with two academic advisors [Goal] At least twice a year [Evidence] Make a report (Form 3) or update portfolio system • Participate in the consortium to have information interchange with Assistant Professor in Organization for Fundamental Research (in preparation) [Goal] At least once during the doctoral course [Evidence] Make a report (Form 2)
Presentation and Technical writing	<p>(Some changes may occur depending on the Graduate Major)</p> <p>Take the class of English presentation and technical writing listed in "Reference – List of courses" document. New class may be established for some Graduate Major.</p> <p>[Goal] At least once during the doctoral course [Evidence] Write down the name of courses in the report (Form 1)</p>
Career path	
Through a	<ul style="list-style-type: none"> • Participate in Dr's K-meet

consortium	<ul style="list-style-type: none"> Participate in a career forum specified by a school <p>[Goal] Any of above, at least once during the doctoral course</p> <p>[Evidence] Make the report (Form 2)</p>
Research internship	<ul style="list-style-type: none"> Take internship courses for each graduate major listed in “Reference – List of courses” document. Take "work experience type research internship" prepared by each department, although it may not be credited. Alternatively, participate in individual internship matching, etc. (in preparation). <p>[Goal] Any of above, at least once during the doctoral course</p> <p>[Evidence] Write down the name of courses in the report (Form 1), or make the report (Form 2)</p>
Education program	<ul style="list-style-type: none"> Take the career courses listed in “Reference – List of courses” document. Take the courses, “practical artificial intelligence and data science” <p>[Goal] Any of above, at least once during the doctoral course</p> <p>[Evidence] Write down the name of courses (Form 1)</p>
Others	
Promotion	<p>Participate in the seminar which promotes doctoral course, etc. held in the department or graduate major, and those held in the laboratory</p> <p>[Goal] At least once a year</p> <p>[Evidence] Make the report (Form 2)</p>

4.4.4. School of Materials and Chemical Technology

Items	Action
Research capability	
Through a consortium	Participate in a study group or seminar in the following. <ul style="list-style-type: none"> • Project or study group sponsored by the consortium of Tokyo Tech Academy • Efforts such as collaborative research between Tokyo Tech and companies • Presentations for promoting industry-academia exchanges held in the human resources development program sponsored by the academic association (E.g., Japan Chemical Industry Association, Chemistry Personnel Cultivation Program) [Goal] At least once during the doctoral course [Evidence] Make the report (Form 2)
Education program	Take a series of course "Progressive Graduate Minor in Data Science and Artificial Intelligence" listed in "Reference – List of courses" document. [Goal] 4 of XCO T677-680, 2 from XCO T687-690 and 2 from others [Evidence] Write down the name of courses (Form 1)
Mentoring	<ul style="list-style-type: none"> • Regularly take an interview with two academic advisors [Goal] At least twice a year [Evidence] Make a report (Form 3) or update portfolio system • Participate in the consortium to have information interchange with Assistant Professor in Organization for Fundamental Research (in preparation) [Goal] At least once during the doctoral course [Evidence] Make a report (Form 2)
Presentation and Technical writing	Take the class of English presentation and technical writing listed in "Reference – List of courses" document. [Goal] At least once during the doctoral course [Evidence] Write down the name of courses in the report (Form 1)
Career path	
Through a consortium	<ul style="list-style-type: none"> • Participate in Dr's K-meet • Participate in a career forum specified by a school, e.g., Career events held in human resources development programs sponsored by academic societies such as Japan Chemical Industry Association, Chemistry Personnel Cultivation Program [Goal] Any of above, at least once during the doctoral course [Evidence] Make the report (Form 2)
Research internship	<ul style="list-style-type: none"> • Take internship courses for each graduate major listed in "Reference – List of courses" document.

	<ul style="list-style-type: none"> Participate in individual internship matching, etc. (in preparation). <p>[Goal] Any of above, at least once during the doctoral course</p> <p>[Evidence] Write down the name of courses in the report (Form 1)</p>
Education program	<ul style="list-style-type: none"> Take the career courses listed in “Reference – List of courses” document. Take the courses, “practical artificial intelligence and data science” <p>[Goal] Any of above, at least once during the doctoral course</p> <p>[Evidence] Write down the name of courses (Form 1)</p>
Others	
Promotion	<p>Participate in doctoral seminar held in departments, graduate majors and laboratories, or public session for interim presentation of the thesis.</p> <p>[Goal] At least once a year</p> <p>[Evidence] Make the report (Form 2)</p>

4.4.5. School of Computing

Items	Actions
Research capability	
Through a consortium	Participate in study group and projects provided by consortiums in advanced information science and engineering human resources development projects and Tokyo Tech Academy [Goal] At least once during the doctoral course [Evidence] Make a report (Form 2)
Education program	Take a series of course "Progressive Graduate Minor in Data Science and Artificial Intelligence" listed in "Reference – List of courses" document. [Goal] 4 of XCO T677-680, 2 from XCO T687-690 and 2 from others [Evidence] Write down the name of courses (Form 1)
Mentoring	<ul style="list-style-type: none"> • Regularly take an interview with two academic advisors [Goal] At least twice a year [Evidence] Make a report (Form 3) or update portfolio system • Participate in the consortium to have information interchange with Assistant Professor in Organization for Fundamental Research (in preparation) [Goal] At least once during the doctoral course [Evidence] Make a report (Form 2)
Presentation and Technical writing	Take the class of English presentation and technical writing listed in "Reference – List of courses" document. [Goal] At least once during the doctoral course [Evidence] Write down the name of courses in the report (Form 1)
Career path	
Through a consortium	<ul style="list-style-type: none"> • Participate in Dr's K-meet • Participate in a career forum specified by a school [Goal] Any of above, at least once during the doctoral course [Evidence] Make the report (Form 2)
Research internship	<ul style="list-style-type: none"> • Take internship courses for each graduate major listed in "Reference – List of courses" document. • Participate in individual internship matching, etc. (in preparation). [Goal] Any of above, at least once during the doctoral course [Evidence] Write down the name of courses in the report (Form 1)
Education program	<ul style="list-style-type: none"> • Take the career courses listed in "Reference – List of courses" document. • Take the courses, "practical artificial intelligence and data science" [Goal] Any of above, at least once during the doctoral course [Evidence] Write down the name of courses (Form 1)
Others	

Promotion	Participate in the event like a doctoral study group held in a laboratory, department or graduate major. [Goal] At least once a year [Evidence] Make the report (Form 2)
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4.4.6. School of Life Science and Technology

Items	Actions
Research capability	
Through a consortium	<p>Participate in Tokyo Tech International Symposium on Life Science and Technology sponsored by school of life science and technology</p> <p>[Goal] At least once during the doctoral course</p> <p>[Evidence] Make a report (Form 2)</p>
Education program	<p>Take a series of course "Progressive Graduate Minor in Data Science and Artificial Intelligence" listed in "Reference – List of courses" document.</p> <p>[Goal] 4 of XCO T677-680, 2 from XCO T687-690 and 2 from others</p> <p>[Evidence] Write down the name of courses (Form 1)</p>
Mentoring	<ul style="list-style-type: none"> • Regularly take an interview with two academic advisors <p>[Goal] At least twice a year</p> <p>[Evidence] Make a report (Form 3) or update portfolio system</p> <ul style="list-style-type: none"> • Participate in the consortium to have information interchange with Assistant Professor in Organization for Fundamental Research (in preparation) <p>[Goal] At least once during the doctoral course</p> <p>[Evidence] Make a report (Form 2)</p>
Presentation and Technical writing	<ul style="list-style-type: none"> • Take the class of English presentation and technical writing listed in "Reference – List of courses" document. • Interim presentation in English is also acceptable. <p>[Goal] Any of above, at least once during the doctoral course</p> <p>[Evidence] Write down the name of courses in the report (Form 1), or make the report for presentation (Form 2)</p>
Career path	
Through a consortium	<ul style="list-style-type: none"> • Participate in Dr's K-meet • Participate in a career forum specified by a school <p>[Goal] Any of above, at least once during the doctoral course</p> <p>[Evidence] Make the report (Form 2)</p>
Research internship	<ul style="list-style-type: none"> • Take internship courses for each graduate major listed in "Reference – List of courses" document. • Take an assignment at academic research institutes. • Participate in individual internship matching, etc. (in preparation). <p>[Goal] Any of above, at least once during the doctoral course</p> <p>[Evidence] Write down the name of courses in the report (Form 1), or make the report (Form 2) for others</p>
Education program	<ul style="list-style-type: none"> • Take the career courses listed in "Reference – List of courses" document. • Take the courses, "practical artificial intelligence and data science".

education	[Goal] Any of above, at least once during the doctoral course [Evidence] Write down the name of courses (Form 1)
Others	
Promotion	Participate in a study group for doctor and the introduction event for masters held in laboratories, department, graduate majors and “Suzukake Science Day,” etc. [Goal] At least once a year [Evidence] Make the report (Form 2)

4.4.7. School of Environment and Society

Items	Actions
Research capability	
Through a consortium	<p>Participate in a study group or seminar in the following.</p> <ul style="list-style-type: none"> • Project or study group sponsored by the consortium of Tokyo Tech Academy • Efforts such as collaborative research between Tokyo Tech and companies • Presentations for promoting industry-academia exchanges held in the human resources development program sponsored by the academic association • Contest or workshop hosted, sponsored and co-sponsored by school of Environment and Society which is authorized by the school as it is contributed to improve research capability. <p>[Goal] Any of above, at least once during the doctoral course [Evidence] Make a report (Form 2)</p>
Education program	<p>Take a series of course "Progressive Graduate Minor in Data Science and Artificial Intelligence" listed in "Reference – List of courses" document.</p> <p>[Goal] 4 of XCO T677-680, 2 from XCO T687-690 and 2 from others [Evidence] Write down the name of courses (Form 1)</p>
Mentoring	<ul style="list-style-type: none"> • Regularly take an interview with two academic advisors [Goal] At least twice a year [Evidence] Make a report (Form 3) or update portfolio system • Participate in the consortium to have information interchange with Assistant Professor in Organization for Fundamental Research (in preparation) [Goal] Any of above, at least once during the doctoral course [Evidence] Make a report (Form 2)
Presentation and Technical writing	<ul style="list-style-type: none"> • Take the class of English presentation and technical writing listed in "Reference – List of courses" document. • Interim presentation in English is also acceptable. <p>[Goal] Any of above, at least once during the doctoral course [Evidence] Write down the name of courses in the report (Form 1), or make the report for presentation (Form 2)</p>
Career path	
Through a consortium	<ul style="list-style-type: none"> • Participate in Dr's K-meet • Participate in a career forum specified by a school <p>[Goal] Any of above, at least once during the doctoral course [Evidence] Make the report (Form 2)</p>
Research	<ul style="list-style-type: none"> • Take internship courses for each graduate major listed in "Reference – List

internship	<p>of courses” document.</p> <ul style="list-style-type: none"> • Perform internship activity authorized by department or graduate major if internship course does not exist or the condition of enrollment does not meet. • Participate in individual internship matching, etc. (in preparation). <p>[Goal] At least once during the doctoral course</p> <p>[Evidence] Write down the name of courses in the report (Form 1), or make the report (Form 2) for others.</p>
Education program	<ul style="list-style-type: none"> • Take the career courses listed in “Reference – List of courses” document. • Take the courses, “practical artificial intelligence and data science”. <p>[Goal] Any of above, at least once during the doctoral course</p> <p>[Evidence] Write down the name of courses (Form 1)</p>
Others	
Promotion	<p>Participate in the event like a doctoral study group held in a laboratory, department or graduate major.</p> <p>[Goal] At least once a year</p> <p>[Evidence] Make the report (Form 2)</p>

4.4.8. Requirement

In this fellowship, some fellowship students may terminate the fellowship less than three years due to the adoption of DC2 or another scholarship program or some other reasons. At that time, some students are additionally hired instead of them.

The following table shows a rough guideline of the requirements on the study program for those students who have the period of fellowship less than three years. Of course, regardless of this table, it doesn't prevent you from doing so at a faster pace. (See chapter 5 next page for Tax filing.)

Period of fellowship Study program	6 months	12 months	18 months	24 months	30 months	36 months
【Research capability 1】 Through a consortium 【Research capability 4】 Presentation & Technical writing	Either one			Both		
【Research capability 2】 Education program	1 class	3 classes	4 classes	5 classes	7 classes	8 classes
【Research capability 3】 Interview with academic advisors	Once	Once	Once	Once	Once	Once
【Career path 1】 Through a consortium 【Career path 2】 Research internship 【Career path 3】 Education program	Any one		Any two		All	
【Others 1】 Promotion	Once		Once		Once	
【Others 2】 Tax filing	Once		Once		Once	
Submission of a report	Once	Once	Once	Once	Once	Once

5. Tax filing of research dedication support funds

The Fellowship Research Dedication Support Funds (1.8 million yen per year) is treated as miscellaneous income under tax law. Therefore, if you are currently receiving tax deduction by supporter (such as a parent), you will need to be excluded from that support. In addition, it is necessary to file a final tax return at the end of the fiscal year.

6. Payment and management of fellowship research funds

Fellowship research funds (up to 300,000 yen per year) will be allocated to the laboratory, and the Administrative Budget Manager will be each academic advisor. Please check the following with your academic advisor.

- Please register a budget execution assistant. Students are not authorized to register, so please assign the person in charge of secretarial work in the laboratory, or from accounting operations office.
- To prepare the audit, please use 「研究経費（学長裁量）- 研学 ★フェロー○○」（← ○○ is the student's name) as the budget name.
- Also, you should remind the following points to keep in mind regarding the use of research funds.
 - Even if it is the budget for use internally, it should be refunded (two-thirds of them). Therefore, you are asked to spend it appropriately.
 - It is possible to execute in combination with other expenses (those with no particular restrictions on usage).
 - Items purchased with research funds cannot be used personally as they will continue to be used for this project even after the end of the project.
 - When spend it as travel expenses, please execute it appropriately so as not to run in the red.

7. Mandatory education on proper and legal research activities

As a fellowship student, there are some rules and things you need to comply with or understand in order to conduct proper and legal research activities. Please take the following two educations to learn them. We will inform you the detail separately.

- Research ethics education (APRIN e-learning)
- Compliance education (Tokyo Tech e-learning)

Regarding spending the research funds, the article 19.1 in Tokyo Tech regulation for Proper Operation and Management of Education and Research Funds (「国立大学法人東京工業大学における教育研究資金の適正な運営・管理に関する規則」) requests to understand properly the rules and the purpose and handling of education and research funds and to spend research fund properly. In addition, the article 19.2 request to submit the agreement. We will inform you the detail.

In order to receive the research devotion support fund and research funds, it is mandatory to take above educations and to submit the agreement.

8. Termination of fellowship funds

You should remember that your research dedication support funds will be stopped if you do not submit a report (Form 1) without valid justification. If the report is submitted, the funds will be resumed from the month in which the report is submitted.

9. Termination of fellowship certification

If a fellowship student falls under any of the following, the president will seek the opinion from the office of Education and International Cooperation and revoke the certification of the fellowship student.

- If any of the following is applicable;
 - If you are receiving other scholarships which restricts you from receiving other scholarships such as JSPS Research Fellowship for Young Scientists, Japanese Government Scholarships and foreign countries government scholarships, etc.)
 - Persons who fall under the category of working adults defined in the school basic survey by MEXT of Japanese government.
 - Those who are receiving the Tokyo Tech Fund Scholarship or the Tokyo Tech Tsubame Scholarship for Doctoral Students
- If the fellowship student does not perform the obligation in Chapter 3 without any unavoidable circumstance.
- If the fellowship student is on leave from the school. (however, if the leave of absence is due to childbirth, childcare, injury or illness, etc. and the committee approves it, the certification of the fellowship student will not be revoked. Fellowship payments may be suspended during the period and resumed when returning to school.)
- If you have exceeded the standard period of study
- If you decline the fellowship
- If you drop out, transfer or be removed from school
- If you are subjected to disciplinary action
- If there are other facts that are not suitable as a fellowship student

10. Return of fellowship funds

The President may request fellowship students who have received fellowship funds by deception or other improper means to return all or part of the fellowship funds that have already been paid with the approval by the Education and International Cooperation Headquarters Meeting.

Contact

The office for advanced human resource development fellowship for doctoral students

cps2.f.app@jim.titech.ac.jp (Attn: Tetsuji Orita, Hiroko Kawai)