

# Hiroshima University Graduate School Research Fellowship Application Guideline

## (Support Starting from October 2023)

The Ministry of Education, Culture, Sports, Science and Technology (MEXT) promotes the "Project for Establishing University Fellowships for the Creation of Innovation in Science and Technology" with the aim of fostering and securing creative researchers who will assume essential roles for the future creation of science, technology and innovation in Japan.

Recently, MEXT selected Hiroshima University to establish Fellowships within the following four research categories: information/AI, quantum physics, materials, and sustainability science. As a result, Hiroshima University has established the Hiroshima University Graduate School Research Fellowship to train advanced research personnel who can lead the creation and utilization of new wisdom, create value that will tow the next generation, and bring science and technology innovation to society. The Fellowship will recruit and select Research Fellows from amongst 1st-year doctoral students of graduate schools and programs related to information/AI, quantum physics, materials, and sustainability science, and provide them with financial and career support so that they concentrate on their research. The program provides the Fellows with stipends and research funds as financial support. Furthermore, the tuition fees of the Research Fellows are planned to be exempted (depending on the Japanese government's budgetary measures).

The call for applications for support starting from October 2023, has been updated below.

### 1. Number of Positions

Research Field	Major Subject (Program)	Number of Fellows to be selected
		Support starting from October 2023
Information/AI	Division of Advanced Science and Engineering (Mathematics Program / Electrical, Systems, and Control Engineering Program (including Smart Innovation Program (Electrical, Systems, and Control Engineering field))/ Informatics and Data Science Program) Division of Integrated Sciences for Life (program of Mathematical and Life Sciences) Graduate School of Innovation and Practice for Smart Society to be established in April 2023 (Cyber Physical System field)	1
	Division of Advanced Science and Engineering (programs other than those listed above) Division of Integrated Sciences for Life (programs other than those listed above) Division of Humanities and Social Sciences Division of Educational Sciences Division of Integrated Health Sciences Graduate School of Innovation and Practice for Smart Society to be established in April 2023 (fields other than those listed above)	
Quantum Physics	Division of Advanced Science and Engineering (Mathematics Program / Physics Program / Quantum Matter Program)	1
	Division of Advanced Science and Engineering (programs other than those listed above)	
Materials	Division of Advanced Science and Engineering (Basic Chemistry Program / Applied Chemistry Program / Chemical Engineering Program / Mechanical Engineering Program / Physics Program / Quantum Matter Program / Smart Innovation Program)	11
	Division of Advanced Science and Engineering (programs other than those listed above) Division of Integrated Sciences for Life (all programs)	
Sustainability Science	Division of Humanities and Social Sciences (International Economic Development Program) Division of Advanced Science and Engineering (Transdisciplinary Science and Engineering Program) Division of Integrated Sciences for Life (all programs) Division of Integrated Health Sciences (Program of Biomedical Science)	3
	Division of Humanities and Social Sciences (programs other than those listed above) Division of Educational Sciences, Division of Advanced Science and Engineering (programs other than those listed above) Division of Integrated Health Sciences (programs other than those listed above) Graduate School of Innovation and Practice for Smart Society to be established in April 2023	

\* The upper part of the "Major Subject (Program)" column for each research field shows the major subjects (programs) that are mainly targeted for the respective research fields, and the lower part shows the other major subjects (programs) which are also eligible to apply.

## 2. Eligibility

The following (1) to (5) are the descriptions of the eligibility requirements applicable to this Research Fellowship.

(1) Applicants must either be enrolled in a doctoral course in April 2023 or be scheduled to enroll in a doctoral course in October 2023 as 1st year students at Hiroshima University (including those who plan to complete the master's course early) to study the major subjects and programs listed in the above table.

(2) Applicants must NOT receive an income that exceeds 2.4 million yen (for the period from January 2023 to December 2023). However, receiving a salary or working part-time in a job such as a TA or RA does not preclude the eligibility requirements.

(3) At the start of the support, Applicants must NOT be supported by the following fellowships or scholarships:

- Research Fellowships for Young Scientists from the Japan Society for the Promotion of Science (including those JSPS has unofficially selected).

- Japanese Government (MEXT) Scholarships for international students.

- Any scholarship/s from the home countries of international students.

(4) At the start of the support, applicants must NOT be supported by any fellowships or scholarships offered by local public agencies/private organizations where recipients are not allowed to receive their current scholarship at the same time as the Research Fellowship.

(5) Applicants must NOT be supported by the Program for Developing and Supporting the Next-Generation of Innovative Researchers at Hiroshima University or the Hiroshima University Fellowship for Female Graduate Students in Science and Technology (including those Hiroshima University has unofficially selected).

\*It is possible to apply for the Program for Developing and Supporting the Next-Generation of Innovative Researchers at Hiroshima University (support starting from October 2023), which is also conducting a call for applications at the same time. Applicants who apply for both Fellowships (the Research Fellowship and the Next-Generation Fellowship) will be asked which Fellowship they would like to prioritize, once the application deadline has passed. Please note that applicants may only be selected for one of the Fellowships and not both.

## 3. Application Method

Please access the online application form (Google Forms) from the following URL, enter the required items, and submit it. The applicant's Google account details and password authentication are required for access.

<Online Application Form> <https://forms.gle/y8asm4DvHLSxLWWd6>

\*Please upload your application documents file saved in PDF format.

\*The application documents may be either in color or black-and-white.

\*The application documents must be filled-out and submitted according to the program's specified format without modification. If you apply using documents which are different from the specified format, your application may not be screened.

\*If you have difficulty applying through the online application form, please attach and send the application documents below 1) and 2) to the e-mail address detailed within "8. Contact Information".

The subject of the e-mail should be "Research Fellowship Application\_○○field".

Application Documents:

1) Application Form (specified format, Excel)

2) Application Documents (specified format, converted from Word into PDF)

## 4. Application Deadline

May 23 (Tue), 2023, 12:00 p.m. (noon, Japan Standard Time)

\*The Fellowship office will not accept any submissions after the appropriate deadline has passed.

## 5. Selection Process and Notification of Results

The Screening Committee for each category of the Research Fellowship will conduct the First Screening (screening of the submitted application documents) and the Second Screening (screening via an interview). Applicants will proceed to the Second Screening only if they successfully pass the First Screening. The Committee will announce the date and time of the interview to each applicant individually.

In addition, regarding the evaluation of each applicant, an emphasis is placed on the applicant's capability to "contribute to bring scientific and technological innovations to Japanese society in the future" as of the purpose of this program. Please note that depending on the results of the First Screening, the Second Screening may not be undertaken.

- First Screening (planned): Early to mid-June, 2023
- Second Screening (planned): Mid-June, 2023
- Notification of Results (planned): Late-July, 2023

All applicants will be notified of the screening results for the Fellowship by e-mail. Please note that individual inquiries regarding each decision will not be able to be responded to.

## **6. Outline of Support after Selection**

Please refer to the attached "Outline of Support by Hiroshima University Graduate School Research Fellowship" for further details.

Furthermore, it is highly recommended that students apply for the Research Fellowship for Young Scientists (DC1/DC2) of the Japan Society for the Promotion of Science (JSPS) as well, even if they are selected as Research Fellows.

## **7. About each Research Field**

### **<Information/AI>**

The information/AI research field promotes the acquisition of technologies necessary for the realization of Society 5.0. Besides, we are developing leading human resources that can open up new possibilities and meet the needs of the international community. This research field aims to develop human resources with both AI/information expertise and application field expertise. Therefore, we will select and support excellent doctoral students motivated to match that direction.

### **<Quantum Physics>**

In the quantum physics research field, viewing quantum phenomena scale-seamlessly in the area from elementary particle physics, physics of solids such as electron spin-driven superconductivity, strongly correlated electrons, quantum magnetism, topological material as well as macroscopic photonics such as quantum optics, photonic quantum information and nano-photonics, to astrophysics such as a black hole and dark matter, we welcome the applicants who aim to open the physics of new quantum phenomena and develop novel quantum physics-based electronic and photonic devices. We also welcome the applicants who desire to open a new paradigm in such mathematics-related to quantum physics as quantum groups and quantum walks.

### **<Materials>**

In the materials research field, we encourage each Research Fellow to cultivate a strong desire for knowledge, enhance their comprehensive viewing capabilities, and improve their transferable skills by promoting cross-disciplinary and integrated education and research activities to develop personnel who can play an active role in both industry and academia and contribute to the strategy for strengthening material innovation, toward the realization of Society 5.0.

### **<Sustainability Science>**

In the field of sustainability, we provide interdisciplinary educational programs necessary to solve global issues such as poverty, conflict, infectious diseases and environmental problems, in order to build a sustainable society. This program develops human resources who understand the complex interdependence between natural environmental systems and human social systems from a macro perspective on a global scale and a micro perspective at the regional level. We hope that these human resources will have the ability to propose and implement problem-solving methods by means such as the social implementation of science and technology, policy planning, and collaboration with stakeholders in any aspect of the world.

## **8. Contact Information**

Research Fellowship Application Office, Hiroshima University (Global Career Design Center)

E-mail: [fellowship@office.hiroshima-u.ac.jp](mailto:fellowship@office.hiroshima-u.ac.jp)

## <Outline of Support by Hiroshima University Graduate School Research Fellowship>

### 1. Research Fellow Support

(1) In order to support the Research Fellows and allow them to concentrate on their studies and/or research, stipends will be provided for up to three years after their enrollment\*. Based on the principle monthly amount of 150,000 yen, two months' worth of payments will be provided in May, July, September, November, January, and March.

\*If a Research Fellow's enrollment exceeds the standard study period, the support will be discontinued.

However, if it becomes necessary for a Research Fellow to suspend or extend the period of support due to childbirth, childcare, illness, etc., the individual's particular circumstances will be considered before a decision is made.

Also, for those selected during a call undertaken to replace previously selected Research Fellows, their support period will be up until the end of the support period of the previous Research Fellow.

(2) The stipends are taxable as a miscellaneous income. Therefore, every Research Fellow is required to file an income tax return.

Furthermore, if a student with dependents (parents, etc.) is provided with a Research Fellowship, they may need to be excluded from their dependents. Therefore, if a student is selected as a Research Fellow, they should inform their dependents (parents, etc.) that the stipends they receive will be treated as a miscellaneous income under the Japanese tax law. For the procedures required to change your health insurance or dependents, please contact the person in charge at the workplace of your dependents (parents, etc.).

(3) For a period of up to three years after a Research Fellow's enrollment, research funds of up to 300,000 yen per year will be funded from the academic year in which they have been selected as a Research Fellow. Furthermore, the maximum amount of research funds for an academic year in which the period of support is six months or less shall be limited to 150,000 yen.

(4) For international students and others who are currently overseas and are provisionally selected for the Research Fellowship, as a general rule, the stipends and research funds will begin to be provided once the Fellow has entered Japan and is able to commute to the University campus (retroactive payments will not be provided for the period of non-entry). Furthermore, any period of non-entry will be treated as a period of suspension and subsequently, the outlined support will be provided for up to three years after entering Japan.

(5) In addition to the aforementioned stipends and research funds, due to a budgetary measure of the Japanese government, the tuition fees of the Research Fellows are planned to be exempted (depending on the Japanese government's budgetary measures).

### 2. Research Fellow Obligations

Research Fellows shall fulfill the following obligations to receive support:

(1) Develop a yearly research plan for each academic year and concentrate on research activities based on the plan.

(2) Participate in programs offered by the University related to improving research capabilities.

(3) Report the progress of research activities to the University regularly.

(4) Have regular meetings with mentors.

(5) Cooperate with various surveys, including follow-up surveys on careers after graduation.

(6) Based upon the “広島大学における研究活動に係る研究倫理教育に関する細則” (only available in Japanese), make sure to undertake necessary research ethics education.

### 3. Research Fellow Cancellation

If a Research Fellow falls under any of the following cases, the Research Fellow will be withdrawn, and the provision of stipends and research funds shall be discontinued:

(1) The Fellow's annual income, from January to December, exceeds a certain amount (2.4 million yen or more per year). Note that this annual income refers to stable incomes, such as standard salaries/remunerations, and does not include income received from paid internships, RA/TA, part-time work, etc.

(2) The Fellow receives a Research Fellowship for Young Scientists from the Japan Society for the Promotion of Science, a Japanese Government (MEXT) Scholarship for international students, or any other scholarship/s from their home country.

(3) The Fellow's research plan progress and/or the fulfillment of the Research Fellow Obligations is deemed insufficient.

(4) The Fellow does not meet the original eligibility requirements.

(5) The Fellow requests to cancel their Fellowship.

- (6) The Fellow takes a leave of absence from the University. However, in the case of childbirth, childcare, illness, etc., the individual's particular circumstances will be considered before a decision is made on the suspension and subsequent resumption of payments, and other such factors.
- (7) The Fellow withdraws from, or is removed from the University.
- (8) The President of the University decides that there is a valid reason to cancel the Fellowship.

#### **4. Repayment of Excess Stipend Payments and Research Funds**

If the period of support is shortened due to early completion, cancellation of support, etc., the payment of the stipends will be stopped at the end of the shortened support period, and any excess amount which has been paid will need to be returned. Also, in principle, the research funds will also need to be returned in proportion to the number of months the support period was shortened by.

#### **5. Others**

- (1) As long as it does not interfere with a Fellow's research activities, it is possible to receive a salary via a RA/TA position, etc., or work part-time.
- (2) The names of those who are selected as Research Fellows will be published on the University's website.
- (3) Any personal information stated within the application documents, and any other necessary personal information provided by the graduate school to which an applicant belongs to, will be used only for the purposes of the selection of candidates, preparation for acceptance, education/research guidance, etc.