# **University Fellowship Founding Project for Innovation Creation in Science and Technology**

Nambu-Einstein Fellowship Program

Fellowship Program to Foster
International Ph.D.-Holding Researchers
through Materials Innovations

Fellowship Program to Foster Architects
Who Lead a Super-Smart Society by
Co-Creating Innovating Solutions to "X-Care" Social Issues

# **Fellowship Student Application Guidelines**

# [Vacancy Recruitment]

For Three-Year Doctoral Course students enrolled in April and October 2022 and For Four-Year Doctoral Course students enrolled in April and October 2021

Osaka Metropolitan University
Doctoral Human Resource Development Support Office
June 2023

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Schedule for application and selection

Application period

Microsoft Forms submission: Fri. July 14, 2023– Mon. July 24, 2023, 12:00 JST Submission of essay and face photo: Fri. July 14, 2023– Mon. July 24, 2023, 15:00 JST Interview (online): One of the following days: Mon. July 31, 2023 - Fri. August 18, 2023 Announcement of Acceptance: Fri. September 15, 2023

# I. Nambu-Einstein Fellowship

# 1. Our Ideal Image of Researcher

Our target with this project is to foster high-level researchers who can cooperate with others to create completely novel values "paradigm shifts"—unbound by conventional concepts—based on a foundation of comprehensive viewpoints and free thinking. To this end, these researchers will be educated in a wide range of scientific and technological disciplines, while simultaneously being exposed to a diverse range of perspectives and value systems. The fellowship will be provided to eligible doctoral-course students. In addition to supporting their research activities, we will also provide programs to improve their research capabilities and support their career paths.

### 2. Obligations of Eligible Students

Fellowship students shall have the following obligations:

- Participation in (every year) and presentation (once during this course) at the fellowship plenary seminar
- Participation in seminar camp or cross-disciplinary research proposal meetings (every year) and research presentations (once during this course)
- Participation in international conferences and lectures (once during this course, participation in international conferences held in Japan is also acceptable)
- Obtaining credits from specific graduate courses (Advanced Technology and Science in Chemical Industry, or Advanced Lecture on Global Management)
- Participation in (every year) and presentation (once during this course) at exchange meetings with private companies
- Individual meetings with mentors (twice a year)
- Application to the Japan Society for the Promotion of Science DC (every year)
- Evaluation of achievement and progress reports on research goals (twice a year)

### 3. Program Features

# (1) Programs to improve research capabilities and support career paths

- Provision of lectures to support the improvement of research capabilities
- Support for research study at domestic and overseas research institutions
- Improvement of research capabilities and provision of a research environment through interdisciplinary and cross-disciplinary collaboration with researchers within the university
- Introduction of multiple supervisory schemes through a mentor system

Quantum Science

# (2) Programs to secure career paths

- Conducting long-term internships
- An opportunity for a temporary academic position in the University after obtaining their Ph.D.
- Conducting an interactive matching event with related companies
- Support for research study at domestic and overseas research institutions

# II Fellowship Program to Foster International Ph.D.-Holding Researchers through Materials Innovations

# 1. Our Ideal Image of Researcher

This program aims to foster doctoral researchers through "Materials Innovations" based on nanoscience in the material research field, who have a fundamental scientific and technical background, advanced subject-matter expertise, superior creativity, and a global outlook as researchers and lead future science and technologies.

### 2. Obligations of Eligible Students

The fellowship student shall have the following obligations:

- Obtaining a certain number of credits from common education courses at graduate school.
- Participation in a long-term internship
- Portfolio management for required skill items
- Evaluation of achievement and progress reports on research goals (twice a year)

### 3. Program Features

#### (1) Programs to improve research capabilities and support career paths

- Providing lectures to support the improvement of research capabilities
- Overseas associate supervisor system
- Providing programs to improve research capabilities and a research environment through disciplinary and cross-disciplinary collaboration with researchers within the university
- Introduction of multiple supervisor scheme through a mentor system

### (2) Programs to secure career paths

- Conducting long-term internships
- An opportunity for a temporary academic position in the University after obtaining their Ph.D.
- Conducting an interactive matching event with related companies

# III Fellowship Program to Foster Architects who Lead a Super-Smart Society with Co-Creating Innovative Solutions to "X-Care" Social Issues

### 1. Our Ideal Image of Researcher

In this program, we define "X-Care problem-solving" as those that require discerning and understanding the health and soundness of people, products, society, and culture, especially in human healthcare, product care, and social system care, as well as the prevention of unhealthy conditions alongside a rapid recovery to a healthy state. The goal of this program is to foster "co-creative X-Care problem-solving architects," who can design systems to achieve X-Care problem-solving process through co-creation activities with various stakeholders. The architects are required to have (1) a "sense of discernment" to decide what information to use to determine the health status of the care target, (2) expertise to essentially decipher the health of the care target from the data, (3) data analytics expertise to process and analyze a vast amount of data on the care target using appropriate algorithms in a timely manner. In addition, they are required to have the ability to design a sustainable ecosystem with many members in order to resolve X-Care issues. Based on these elements as a background, this program will foster human resources with the ability to solve social issues through an interdisciplinary approach, focusing on informatics and collaborating with the natural sciences, humanities, and social sciences.

### 2. Obligations of Eligible Students

The fellowship student shall have the following obligations:

- Obtaining a certain number of credits from common education courses at graduate school
- Participation in a long-term internship
- Portfolio management for required skill items
- Evaluation of achievement and progress reports on research goals (twice a year)

### 3. Program Features

# (1) Programs to improve research capabilities and support career paths

- Providing opportunities for co-creative joint research
- Providing lectures that contribute to solving X-Care issues
- Providing lectures to support the improvement of research capabilities

### (2) Programs to secure career paths

- Conducting long-term internships
- Introduction of multiple supervisor scheme through a mentor system
- Conducting an interactive matching event with Associate companies

# **IV Common Items to All Programs**

# 4. Application Requirements

Applicants must have excellent research abilities and meet the following requirements to ensure the successful execution of this project.

# (1) <u>Graduate Schools and Majors of Osaka Metropolitan University listed in Table 1</u>

# (Three-Year Doctoral Course).

Persons who were admitted in April 2022 or October 2022 to the graduate schools and the majors listed in **Table 1**, and are enrolled without taking a leave of absence as of October 1, 2023.

# (2) <u>Graduate Schools and Majors of Osaka Prefecture University and of Osaka City</u> <u>University listed in Table 2 (Four-Year Doctoral Course)</u>

Persons who were admitted in April 2021 or October 2021 to the graduate schools and the majors listed in **Table 2**, and are enrolled without taking a leave of absence as of October 1, 2023.

\* Even if you meet these requirements above, you may not be eligible in case you have taken a leave of absence after enrollment in the doctoral course. Please check individually with the Doctoral Human Resource Development Support Office (See "13. Contact for Inquiries.") if it is the case.

Students who fall under any of the following categories as of the support starting date will be excluded:

- Students who have been selected as a Research Fellowship for Young Scientists (DC) of the Japan Society for the Promotion of Science (JSPS)
- International students supported by the Japanese Government (Japanese Ministry of Education, Culture, Sports, Science, and Technology [MEXT]) Scholarship Program
- · International students who receive scholarships and/or other support from their home country
- Working students who are eligible to receive a stable and enough amount of money as living expenses from their affiliated company (2.4 million yen/year as a reference).
- Those who are receiving support from the University's Program for Developing Human Resources with Rhizome-based Research Approach (Support for Pioneering Research Initiated by the Next Generation) or this project. However, this does not apply to those who have submitted a notification of withdrawal of support by the time of application for this program (the present support will have to be terminated by September 30, 2023). If an application is submitted without submitting a notice of withdrawal, the application will be invalidated.

#### Common Items

#### Precautions

· About receiving other financial supports, such as scholarships from JASSO and other foundations

Since this program is targeting to "create an environment where students can concentrate on their research" and JASSO scholarships has a different nature, you may receive support from this program and either loan-type or benefit-type scholarships at the same time in principle. It is important to also check with JASSO to ensure there are no issues with receiving their scholarships along with the funding from this program. It goes the same with receiving scholarships from other foundations, so please consult with the foundations if they have any concerns.

### ·Second/Third Choice

If you are not selected for your first choice of the program, you may further apply for second and/or third choice(s) in a different field of fellowship programs. Nevertheless, such further application is considered only if the field and/or program of your second and third choices have not been filled. Please note that the second and third choices cannot be the same field/program. If you apply for the second or third choice, please check the eligibility requirements for the relevant project or field.

Please apply for the fellowship programs upon understanding the purpose and contents by watching explainer videos for each program and the founding project "University Fellowship Founding Project for Innovation Creation in Science and Technology" on the following website: https://www.omu.ac.jp/fellowship/

[Table 1] \*See also "5. Number of students to be accepted (capacity)" on Page 8.

Sustainable System Sciences  Literature and Human	ool/Department/Major  re admitted in April and October 2022  Sustainable System Sciences  Philosophy and History  Human Behavioral Sciences	Quantum Science ×	Materials	Smart Society
Sustainable System Sciences  Literature and Human	Sustainable System Sciences Philosophy and History Human Behavioral Sciences	×	0	
Sciences  Literature and Human	Philosophy and History Human Behavioral Sciences		0	
Literature and Human	Human Behavioral Sciences	×	•	0
<del> -</del>			×	0
<u> </u>		×	×	0
Sciences	Language and Culture	×	×	0
	Cultural Management	×	×	0
Law	Law and Political Science	×	×	0
Economics	Economics	×	×	0
Business	Global Business	×	×	0
Urban Management	Urban Management	×	×	0
I C	Core Informatics	0	0	0
Informatics	Interdisciplinary Informatics	×	0	0
	Mathematics	0	0	0
	Physics	0	0	0
G :	Chemistry	0	0	0
Science	Biology	0	0	0
	Geosciences	0	0	0
	Biological Chemistry	0	0	0
	Aerospace and Marine-System Engineering	×	0	0
	Mechanical Engineering	×	0	0
_	Urban Engineering	×	0	0
<del> -</del>	Physics and Electronics	0	0	0
	Electrical and Electronic Engineering	×	0	0
	Science and Engineering for Materials, Chemistry, and Biology	0	0	0
	Quantum and Radiation Engineering	0	0	0
	Applied Biological Chemistry	×	0	0
<del> -</del>	Agricultural Biology	×	0	0
	Environmental Sciences and Technology	×	0	0
	Rehabilitation Science	×	0	0
+	Nursing	×	×	0
	Human Life and Ecology	×	Ô	0

**Table 2** \*See also "5. Number of students to be accepted (capacity)" on this page.

Graduate Sc For Students who were a	Quantum Science	Materials	Super- Smart Society	
OPU/ Life and Environmental Sciences	Veterinary Science	×	0	0
OCH/Matician	Basic Medical Science	×	0	0
OCU/ Medicine	Clinical Medical Science	×	0	0

# 5. Number of students to be accepted (capacity)

Name of	Number of students to be accepted	
the Program	For all the students in Table 1 and Table 2	
Quantum Science	2 students	
Materials	7 students	
Super-Smart	1 -444	
Society	1 student	

# 6. Application Process

### (1) Where to apply:

Please visit https://forms.office.com/r/NPdtRS3zaL and submit the required information.

Submission deadline: 12:00 (noon) JST on the last day of the application period

Also send the files listed in "(2) Files" below to the following address

by email: gr-knky-fellow-na@omu.ac.jp

Submission deadline: 15:00 JST on the last day of the application period

\*Notification of receipt will NOT be sent.

Please do not forget to encrypt the files, and send the password(s) in a separate email.

Your application will be received by completing the submission of both Microsoft Forms and the required files. Doctoral Human Resource Development Support Office will contact you only to inquire about your entry on Forms or request for re-submission of the files.

\*The application on Microsoft Forms sets many sections for entry and it will take time for you to complete filling in. Please allow yourself sufficient time to proceed with the application. If you submit the application form multiple times, only the most recent submission will be considered valid and received.

### (2) Files

1. Essay using Form 1 (attached)

Please name the file "Student ID Number Name.pdf" (in .pdf format only).

2. Face Photo (above shoulders) (jpg, bmp, png format).

Please name the file "Student ID Number\_name.jpg" (or bmp, png).

If you belong to another university at the time of application, you do not need to enter your student ID number.

Form 1 can be downloaded from

https://www.omu.ac.jp/fellowship/info/recruitment/entry-30502.html

### Notes for special caution

- (1) Incomplete application documents will not be accepted.
- (2) Documents submitted at the time of application will not be returned.
- (3) No revisions of documents are allowed after the application procedure has been completed.
- (4) If it is confirmed that the information entered in the application form, or the information contained in the submitted documents, is not true, the applicant's eligibility to participate in this project may be revoked.
- (5) Personal information provided by applicants will be used only for the selection purpose only.
- (6) No application fee is required for the selection process.

### 7. Selection Method

#### (1) Examination contents

Subjects for examination	Scoring	Outline etc.	
Short essay	100 points	To be prepared in accordance with Form 1.	
Interview	100 points	This will be conducted online. You will have 7 minutes at the beginning to present your essay, followed by a 13-minute question-and-answer session. In your presentation, you may utilize Microsoft PowerPoint or other presentation tools.	

(2) Evaluation method: Evaluation (scoring) will be performed in accordance with the results of the essay and interview. Scoring will be based on the Rubric Evaluation Table.

Quantum Science

https://www.omu.ac.jp/fellowship/assets/Rubric-Evaluation-Tables\_EN\_Quantum-Sience\_1.pdf
Material

https://www.omu.ac.jp/fellowship/assets/Rubric-Evaluation-Tables\_EN\_Materials%20(5).pdf Super-Smart Society

https://www.omu.ac.jp/fellowship/assets/Rubric-Evaluation-Tables EN Super-Smart-Society 1.pdf

### 8. Date and Place of Interview (online)

After the application documents are received, the date and time will be designated sometime between Mon. July 31, 2023 and Fri. August 18, 2023. The interview will take approximately 25 minutes.

If, during the abovementioned time periods, you are unable to attend an interview for legitimate reasons such as the university entrance examination or presentations at academic conferences, please specify your unavailability for the interview with the reason in the designated column of the application form (you may be asked to submit documentation to verify the reason later). However, this does not guarantee that the interview will be held at a time other than the specified time slot.

We will inform you of the date and time of the interview and the URL for the Zoom meeting by Friday, July 28. If you do not hear from us by 16:30 JST on Friday, July 28, please contact us by 17:00 JST on the same day at the e-mail address listed in "13. Contact for Inquiries."

#### Notes:

- (1) In the event that an interview cannot be conducted as scheduled due to a natural disaster, etc., an "emergency notice" will be sent out via e-mail, so please check.
- (2) Emergency contact information on the day of the interview is the same as in "13. Contact for Inquiries."

### 9. Schedule

### (1) Application Period

Microsoft Forms submission: Friday, July 14, 2023– Monday, July 24, 2023, 12:00 JST. Submission of essay and face photo: Friday, July 14, 2023– Monday, July 24, 2023, 15:00 JST.

(2) Notification of Interview Date and time

Notification is to be sent by Friday, July 28 to the e-mail address provided on the application form

### (3) Interview

Monday, July 31, 2023 through Friday, August 18, 2023 between 9:00 JST and 17:05 JST. The interview will take approximately 25 minutes.

#### (4) Announcement of Acceptance

Friday, September 15, 2023: Successful applicants will be notified at the e-mail address that you provided on your application form.

We will not respond to any inquiries regarding acceptance or rejection by phone.

Common Items

### 10. Program Period and Eligibility

- 1. Program period: From Sunday, October 1, 2023 to the end of the standard period of enrollment
- 2. Eligibility: Applicants who have passed this selection process and enrolled in the graduate school and the major described in "4. Application Requirements" as of October 1, 2023.

#### Note:

Supports may be terminated if you take a leave of absence during the support period depending on the reasons.

# 11. Fellowship Payment

Students who are eligible for this program can apply for a fellowship (2.3 million yen per year [2 million yen is for the research dedication support fee and 300,000 yen is for research funding]).

\*Half the amount in FY2023 for those who join from October.

\*The fellowship will be paid and allocated after the program start date.

This research dedication support fee is treated as miscellaneous income at tax treatment.

#### 12. Notes

This program does not provide reductions, exemptions, or assistance for entrance and tuition fees. (For information on reduction/exemption programs, or subsidies for entrance and tuition fees and other financial aid programs offered by the university, please contact the respective department in charge of the program.)

# 13. Contact for Inquiries

Please inquire at the Doctoral Human Resource Development Support Office.

Please note that inquiries will be accepted only by email to avoid any discrepancies in the information shared by the Support Office. We thank you in advance for your understanding.

Doctoral Human Resource Development Support Office

Email: gr-knky-fellow-na@omu.ac.jp

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# **Essay Form**

			Examinee's	(Do not fill in)		
			number			
Name				Date of Birth YYYY/MM/DD		
Name						
Current	Major in, Graduate School of		Acadeı	mic		
Affiliation	Major in, Graduate School of (Name of University)		Superv	isor		
Subject of rese	arch					
Research Keyv	words (about 5)					

This is the end of the information to be included on this page.

Please start your essay from the next page in accordance with the instructions below.

- There is no fixed format or template for this essay assignment.
- Please make it intelligible for people outside the field.
- The essay must not be more than 2 pages long in A4 paper size when written in Japanese (approximately 45 characters a line and 40 lines on a page) including images, tables, and graphs. The maximum word count is 2000 words when written in English. When describing your achievements in the essay, please write "Applicant" to refer to yourself. Do not include your name.
- Please include the following 3 points in your essay.

Understand the ideal researcher characteristics of the fellowship program (Quantum, Materials, and Super-Smart Society) that you are applying for:

- (1) Describe the purpose of your research (academic background, specific objectives, features, original points, etc.) and your plan (specific research content and methods to achieve the research goal, etc.). Carefully describe your research in such a way that it can be understood by researchers outside your field of expertise. Describe how your research will lead to the resolution of problems with respect to natural science, science and technology, people, society, and culture, as well as the position of your research. Applicants who applied for JSPS Research Fellowship for Young Scientists in FY2024 may attach the application form as a supplementary document.
- (2) Describe what types of transferable skills\* you intend to acquire in this program and why and how you intend to acquire them.
  - Transferable skills in this program: skills that can be widely transferred and applied, such as originality, free thinking, a challenging spirit, the ability to identify research needs, research management skills, interactive skills, and leadership skills that attract people, which are necessary for innovative human resources.
- (3) Describe your thoughts on your career path after completing the doctoral course and how you would like to be active and contribute to society.