

# Application Procedures for Grants-in-Aid for Scientific Research - KAKENHI -

### FY2021

Fund for the Promotion of Joint International Research (Fostering Joint International Research (B))

This English version is provided for convenience of prospective KAKENHI applicants who experience difficulty in reading the Japanese original, which should be referred to, in case of dispute.

April 1, 2021

Japan Society for the Promotion of Science (https://www.jsps.go.jp/)

### Introduction

This document describes the procedures and other matters relevant to the "Call for Proposals for the Grants-in-Aid for Scientific Research-KAKENHI- for FY2021", including "Fund for the Promotion of Joint International Research (Fostering Joint International Research (B))" (hereinafter referred to as "Fostering Joint International Research (B)").

### The contents are:

- I Outline of the Grants-in-Aid for Scientific Research-KAKENHI-(Omitted)
- **II** Call for Proposals
- **III** Instructions for Prospective Applicants
- **IV** Instructions for Grant Recipients
- V Instructions for Administrative Staff of Research Institution(Omitted)
- VI Other Relevant Issues(Omitted)

"II Call for Proposals" provides for each of the Research Categories, such basicissues as the subjects in the research categories to be called, the range of envisaged total budget, a project period, etc. The schedule from the call for proposals, through the proposal submission and the review, to the grant delivery is also described.

The subsequent sections, "III Instructions for Prospective Applicants", "IV Instructions for Grant Recipients" and "V Instructions for Administrative Staff of Research Institution" describe the conditions for application, required procedures, and other matters, to be followed by the respective actors. Relevant actors are requested to thoroughly check the related chapters.

The major changes in the call for proposals for FY2021 are listed on the following pages.

- Grants-in-Aid for Scientific Research is a competitive funding intended to provide financial support for creative and pioneering research conducted by individual researchers. Therefore, the contents of the Research Proposal Document must be original planned by the applicant.
  - In preparing Research Proposal Document, plagiarism and/or misappropriation of the research contents of others are strictly impermissible. Applicants must comply with research ethics.
- The research using the KAKENHI fund should be carried out by the researcher(s)' own initiative and responsibility. Therefore, the implementation of a KAKENHI research project and publication of the research results are solely attributed to the researcher(s)' responsibility and view, and do not reflect that of the funding sector nor of the government.
- To ensure the quality of scientific knowledge and to gain trust of society on scientists and scientific communities, it is essential to exercise fair and conscientious research activities with the adherence to the code of conduct for scientists. Applicants must understand and practice the contents of both the statement "Code of Conduct for Scientists -Revised Version-" (section I. "Responsibilities of Scientists") by the Science Council of Japan and the booklet "For the Sound Development of Science The Attitude of a Conscientious Scientist -" (especially section I "What Is a Responsible Research Activity?") issued by the Japan Society for the Promotion of Science (JSPS).

### < Major Changes for Call for Proposals in Fiscal Year 2021 >

- (1) Starting from the FY2021 Call for Proposals, the cost of "buyout", i.e. someone taking over a part of the duties (other than research) of the Principal Investigator or Co-Investigator(s), can be covered by the direct expense of KAKENHI. This amendment is put into operation according to the "Adjustment Enabling Direct Expense of Competitive Research Funds to Cover the Costs of Assignments Other Than Research (Introduction of Buyout System)" (October 9, 2020, Agreement of the Liaison Meeting of Related Offices and Ministries on Competitive Research Funds). (See page 31)
- (2) Having started in April 2020, a young researcher employed with a KAKENHI grant is allowed to conduct his/her own research, under certain conditions, even within the assigned working hours of the KAKENHI project. This amendment has been put in operation according to the "Implementation Guidelines for Self-motivated Research Activities by Young Researchers Employed with Competitive Research Funds" (February 12, 2020, Agreement of the Liaison Meeting of Related Offices and Ministries on Competitive Research Funds). (See page 9)

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[References]  The application forms (Research Proposal Document) and other application material are contained in separate files. Please refer to "Supplementary edition to the Application Procedures for Grants-in-Aid for Scientific Research-KAKENHI- for FY2021 (Fund for the Promotion of Joint International Research (Fostering Joint International Research (B))) (Forms/Procedures for Preparing and Entering a Research Proposal Document).
* The application forms (Research Proposal Document) and other application materials can be downloaded from the ISPS website (cf. URL below)

 $(URL) \quad https://www.jsps.go.jp/j-grantsinaid/35\_kokusai/04\_kyoudoub/download.html$ 

### II. Call for Proposals

### 1. Research Categories for which a Call for Proposals is Organized

## Fund for the Promotion of Joint International Research (Fostering Joint International Research (B)): KAKENHI (Multi-year Fund)

### A) Purpose:

This grant supports researchers aiming at achieving a major development in creative and pioneering research by conducting joint international research necessary for the development of scientific research. By conducting joint international research overseas, domestic researchers can take the central role in international network, which seeks to build out infrastructure of joint international research or further strengthen joint international research. In addition, early-career researcher is required to participate in project members, which expects to foster researchers who can play leading roles within the international scientific area, and to maintain and develop the infrastructure of joint international research in medium- to long-term.

Since this funding system seeks to build out infrastructure of joint international research or further strengthen joint international research, the grant supports highly selected research projects by assessing not only the significance as scientific research of research initiative, but also assessing the effectiveness of the research plan conducted in overseas research institution, etc.

### B) Funding target:

• A research plan must include the joint international research project conducted by domestic researchers with the researcher(s) who belongs to an overseas research institution (overseas joint researcher).

Domestic researchers are required to visit the "overseas research institution, etc." which is the core of excellence of the overseas researcher(s) to implement research activities, and the research activities must be the core of the research plan. (\*1)

- A research plan must presuppose the above in which Principal Investigator should mainly visit the "overseas research institution, etc." to implement research activities.
- At least 3 domestic researchers should be involved in the project (as Principal Investigator or Co-Investigator). A desirable number of researchers is 5.

Moreover, at least one early-career researcher (\*2) should be involved in each project (as Principal Investigator or Co-Investigator). However, in case an early-career researcher applies as Principal Investigator, his/her project is eligible even when the project is conducted just by himself/herself or with one another early-career researcher.

\*1 About "visiting the "overseas research institution, etc." to implement research activities"

The meaning is that going along him/herself is mandatory and essential element for the research plan. The examples are shown below.

a) A joint research which is expected to develop by the cooperation/collaboration with

overseas researcher (or a group of researchers) such as utilizing the research facility of

overseas research institution.

b) Field survey, observation, or resource acquisition which is jointly conducted with overseas

researcher (or a group of researchers) in the specific foreign region.

c) Other equivalent research

For above reason, this grant dose not target such as mere research meeting or convention.

Although it is acceptable to involve the domestic research activities to the research plan

within a necessary range, this funding system emphasize the research activities in overseas

research institution and intensively supports such activities. Keep in mind this point both

when developing an idea of research plan and implementing the research plan.

\*2 About the requirements of early-career researcher

This grant targets an applicant who is less than 8 years after the acquisition of his/her Ph.D. as

of April 1, 2021 and an applicant who is deemed less than 8 years after acquisition of his/her

Ph.D. by exempting the period(s) of prenatal/postpartum break or childcare leave.

Even an applicant who does not carry a degree, this grant also targets an applicant who is 39

years of age or under, as of April 1, 2021.

C) Range of total budget: Up to 20 million yen

(In contrast to Fostering Joint International Research (A), "cost of replacement staff" is not

permitted as the research expenditure.)

D) Research period: 3 to 6 years

E) Review Section and Review Method:

Review Section: Medium-sized Section

Review Method: Two-Stage Document Review

F) Application requirements, restriction on parallel grant application/receipt, etc.:

o Applicant can propose no more than one project for this research category either as a Principal

investigator or a Co-Investigator. For this reason, Principal Investigator should confirm enough

the Co-Investigators' will to participate in the research plan, when organizing the project

members.

o Early-career researcher should be participated in the project members from the view point of

build-out of infrastructure or further strengthening of joint international research. For this

reason, early-career researcher should be participated as either Principal Investigator or

Co-Investigator.

2

- For the restriction on parallel grant application/receipt, refer to Attached Table 1 "Table of Restriction on Parallel Grant Application/Receipt" (see page 15-17). The below restrictions on parallel grant application/receipt are mainly applied.
  - The simultaneous receipt of grants between this research category and Specially Promoted Research or Scientific Research (S) is not permitted. For this reason, you cannot apply at this time, if your research proposal for Specially Promoted Research or Scientific Research (S) have already been adopted.
  - The parallel submission of research proposals to this research category and Scientific Research (A/B/C) is permitted. However, the parallel submission with Scientific Research (A/B) (application section "Overseas Scientific Investigation") (continued) is not permitted.
  - The parallel submission of research proposals to this research category and Early-Career Scientists (new proposal) is permitted. However, if your research proposal for Fostering Joint International Research (B) applied at this time is adopted, the research proposal for Early-Career Scientists (new proposal) is to be abolished. Note that the parallel submission with Early-Career Scientists (continued) is not permitted.
  - The parallel submission of research proposals to this research category and Fostering Joint International Research (A) is not permitted. For this reason, the researcher whose research proposal for Fostering Joint International Research (A) (including Fostering Joint International Research adopted before FY2017) has been adopted cannot apply for this research category as a Principal Investigator but can participate in this research category as a Co-Investigator.

### < Points to be noted>

It is desirable to internationally publish the research achievements such as publication of papers written by international co-authorship, presentation in international conference, and so on.

### G) About the Letter of Intent:

Principal Investigator should give concrete contents of his/her research plan, relate the roles to be assigned to them and obtain his/her/their full consent to prepare Letter of Intent. This Letter of Intent of established form, which is confirmed between Principal Investigator and overseas researchers, is required for the application. Furthermore, this letter will be used as a part of the Research Proposal Document for the review.

### H) Background and other relevant matter of this newly established system:

"Overseas Scientific Investigation" formerly called has been reformed as this research category. From the viewpoint of strengthening joint international research, the scope is broadened to encompass more general scientific investigations not limited to field surveys etc.

As for the purpose and basic idea of the establishment of this research category, refer to "On the Call for Proposals, etc. of the Fostering Joint International Research (B) (Tentative Name)" (January 26, 2018, Subdivision on Grants-in-Aid for Research in the Subdivision on Science,

Council for Science and Technology, Material 2-1). Confirm this material enough before planning and preparing research plan.

URL: https://www.mext.go.jp/b\_menu/shingi/gijyutu/gijyutu4/041/shiryo/1400822.htm

### 2. Schedule from Application to Grant Delivery

## (1) Procedures that need to be completed prior to the deadline for the submission of the application documents

Principal Investigator should sufficiently cooperate with the research institution, and should adequately respond to its requests.

The Date and Time	Procedures to be Performed by the	Procedures to be Performed by the
The Date and Time	Principal Investigator	Research Institution
	(See "III. Instructions for Prospective	(See "V. Instructions for Administrative
	Applicants")	Staff of Research Institution")
From April 1 (Thursday), 2021 Start of the Call for Proposals	1)Preparing the Application Investigators should access the Electronic Application System using the ID and the e-Rad Password which has been provided by the research institution and preparing the application.	Procedures to be completed, if the need arises  1) The Research Institution obtains an ID and Password for e-Rad from the person in charge of the operation of e-Rad (This does not apply if the research institution already obtained them.)  *The issue of the ID and the Password takes about 2 weeks.  2) Registration of the Researcher Information in e-Rad and other matters.  3) Research institutions issue an ID and password to the Principal Investigators. (This does not apply if the researcher already obtained an ID and a password.)  [Procedures to be completed, if the need arises]  4) The researchers who belong to the Institutions give a consent to become the Co-Investigator.
	[Procedures to be completed, if the need arises] 2) Participation process of the Co-Investigator-to-be joining as a project member	5) Submission of the "Self-assessment Checklist on the Implementation of the System", based on the "Guidelines on the Management and Audit of Public Research Funds at Research Institutions".
	3)Submission (Sending) of the Application Documents The Principal Investigator should submit (send) the application documents to the research institution he/she belongs to, by the deadline decided the research institution.	Submission of the "Checklist Pertaining to the Current Status" based on "Guidelines for Responding to Misconduct in Research"  *If both Checklists have been submitted separately after April 2020, there is no need for resubmission.
		Deadline for submission:  May 31(Monday) (to be strictly observed)
		6) <u>Submission (Sending) of the Application</u> <u>Documents</u>
<b>Deadline for the Submission:</b>		
May 31 (Monday)		
4:30 pm		
(to be strictly observed)		

### Notes:

1. After the Principal Investigator submits (Sending) the application to the research institution (mentioned in "Procedures to be Performed by the Principal Investigator" 3), the research institution should submit (Sending) to the JSPS the application by the deadline for the submission (mentioned in "Procedures to be Performed by the Research Institution" 6).

- Next, he or she should verify the section "Preparation of the KAKENHI Application Form" (pages 18-32), etc. as well as verify the procedures designated by the research institution, etc. (deadline for the submission of the application, etc., in the research institution) with the office worker in charge in the research institution.
- 2. When the researcher is applying for KAKENHI, he or she should register the researcher information beforehand in e-Rad. The research institution should perform the registration in e-Rad. Therefore, the researcher who is planning to apply should verify the state of the registration with the office worker in charge in the research institution.
- 3. The research institution should submit a "Self-assessment Checklist on the Implementation of the System", based on the "Guidelines on the Management and Audit of Public Research Funds at Research Institutions (Implementation Standards)" and a "Checklist Pertaining to the Current Status" based on "Guidelines for Responding to Misconduct in Research" (mentioned in "Procedures to be Performed by the Research Institution" 5). If it has not been submitted, no official grant decision will be made for the researchers belonging to the research institution in question.
  - The research institution that did not submit these two checklists in FY2020 should submit them in FY2021 format after April 1, 2021 onwards.
- 4. If the project members are organized with some Co-Investigators, the Principal Investigator should conduct the consent process to register the Co-Investigators through the electronic application system (mentioned in "Procedures to be Performed by the Principal Investigator" 2). And the Co-Investigators-to-be need to obtain a necessary consent to become a Co-Investigator from their research institutions, and so on (mentioned in "Procedures to be Performed by the Research Institution" 4). The Principal Investigator cannot submit (send) the Research Proposal Document to his/her research institutions until the research institutions to which the Co-Investigators-to-be belong give the consent to become a Co-Investigator in the research project, and so on. For this purpose, the Principal Investigator is asked to organize the project members immediately (see page 28).

### (2) Schedule after the Submission of the Application Documents (plan)

The schedule below is as of April 1, 2021. There may be changes in the plan including the timing of the provisional grant decision due to COVID-19. When the changes occur it will be announced on the JSPS website and through the research institutions.

### Fostering Joint International Research (B)

June 2021 to September 2021: Review (\*)
Early October 2021: Provisional grant decision
Middle October 2021: Disclosure of review results
Late October 2021: Formal application for grant delivery
Early December 2021: Official grant decision

### **III. Instructions for Prospective Applicants**

### 1. Procedures to be Completed Prior to Application

The following three items must be completed prior to the submission of the research proposal:

- (1) Ascertainment of the Eligibility for KAKENHI Application
- (2) Confirmation of the Researcher Information Registered in the e-Rad System
- (3) Obtainment of an ID and a Password for the Electronic Application System

### (1) Ascertainment of the Eligibility for KAKENHI Application

An applicant submitting a research proposal to Grant-in-Aid for Scientific Research (KAKINHI) as Principal Investigator (PI) must meet the requirements ① and ② stated below.

A researcher carrying KAKENHI eligibility through more than one research institution can submit application(s) through either of the research institutions.

Note that researcher can apply or receipt of no more than one project for the research category either as a Principal investigator or a Co-Investigator.

At the time of the proposal submission, a researcher needs to have been approved by his/her research institution (\*) as an eligible researcher who meets the Requirements 1),
 2) and 3) stated below, and have his/her Researcher Information properly registered in the e-Rad system as eligible for KAKENHI application.

### Requirements

- 1) The applicant must be an individual belonging to a research institution with job assignment including research activity within the said institution. (Whether the job is paid/unpaid, or full-time/part-time is irrelevant. It is not a prerequisite of eligibility that the research activity constitutes the main part of his/her job.)
- 2) The applicant must be actually engaged in research activity in his/her research institution. (Those who are only engaged in research assisting jobs are ineligible.)
- 3) The applicant must not be a graduate student or any other categories of student. (An individual who has a position in a research institution with a research activity as his/her main job (e.g., a university teaching staff, researcher belonging to a company, etc.), and holds a student status at the same time is ineligible.)
- (\*): Here, the research institution must be such that designated according to the Article 2 of the "Rules for the Handling of Grants-in-Aid for Scientific Research" (issued by the MEXT).

(Reference) Requirements that the research institution must meet:

### Requirements

- The research institution must authorize the research project for which KAKENHI is granted, as its proper activity.
- The research institution must take responsibility for management and accounting of the KAKENHI delivered to its researcher staffs.
- 2 The individual must not be categorized as ineligible for grant acquisition in the fiscal year covered by a call for proposals, as a penalty for his/her improper grant spending, fraudulent grant acquisition, or research misconduct.

### <Important Point 1>

A researcher who is employed by a KAKENHI grant (hereafter called "KAKENHI employee"), is generally bound by their employment contract to concentrate on the research work relevant to the KAKENHI project for which he/she is employed (hereafter called "employment-related work") specified in his/her employment contracts. Therefore, such a KAKENHI employee cannot apply for his/her own KAKENHI project which is to be conducted within the working hours of his/her employment.

However, provided that he/she can clearly demarcate his/her own research hours from the working hours of employment and intends to conduct his/her own research project during the former hours

on his/her own initiative, the KAKENHI employee can submit his/her own KAKENHI proposal, on the condition that the following points are verified by his/her research institution. The KAKENHI employee can apply for KAKENHI as a PI or become a Co-I.

- The KAKENHI employee is granted on his/her employment contract, to conduct research on his/her own initiative, besides the employment-related work.
- The employment-related work and the work devoted to the research on his/her own initiative are clearly demarcated in regard to the working hours and the effort.
- The KAKENHI employee is able to secure enough research hours (besides the working hours for his/her employment-related work) to be allotted to his/her own KAKENHI project.

### [Self-motivated research activities by young researchers employed with KAKENHI funding]

A young researcher (\*) who is employed with KAKENHI funds (KAKENHI employee) and meets the following conditions, may conduct his/she own research during the working hours assigned for the employment-related work, after going through the necessary procedures set by his/her research institution. He/She can apply for KAKENHI as a PI or become a Co-I.

- (1) A young researcher desires on his/her own will to conduct his/she own research.
- (2) The PI and Co-I (the employer of the young researcher) desires that the said research has a positive contribution to the promotion of the funded research project for which he/she is employed, and the research institution approves the said decision.
- (3) The PI and Co-I judges that the efforts to be spared by the young researcher to the said research within the extent that do not cause any hindrance to the execution of the funded research project for which he/she is employed, and the research institution approves the judgement. (The upper limit of the efforts to be spared to the self-motivated research is 20 percent of the efforts to be put into the funded research project for which he/she is employed.)
- \* In this context, "young researcher" is defined as an individual who is age 39 or under, or less than 8 years after Ph.D. acquisition as of April 1 of each fiscal year, and whose job assignment includes research activities. When applying for Grants-in-Aid for Scientific Research (KAKINHI) he/she must meet the eligibility requirements for KAKENHI application.

(Reference) Views on the self-motivated research activities by the KAKENHI employee

Attachment 1 to the "Changes in the FY2020 Call for Proposals for Grants-in-Aid for Scientific Research (KAKENHI) and Other Matters" (March 19, 2020) (Excerpt)

https://www.jsps.go.jp/j-grantsinaid/06 jsps info/g 200316/index.html

Grants-in-Aid for Scientific Research (hereinafter referred to as "KAKENHI") is a funding scheme that is intended to promote development of scientific research (based on original ideas of researchers), encompassing basic to applied researches in all fields ranging from humanities and social sciences to natural sciences. Scientific research is a source of innovation *i.e.*, value creation based on new knowledge and has a vital role in nurturing human resources for leading a

knowledge-based society broadly. It is particularly important to foster young scientists who are responsible for the next generation in order that the scientific research may sustainably exercise its role in the society.

It enables young researchers employed with a KAKENHI grant to conduct self-motivated research activities (including research activities with other research funds and activities helping research/management capacity building; hereinafter the same). Allowing them to conduct research activities in an independent and free research environment contributes not only to fostering young researchers, but also to the further development of the KAKENHI projects of their research institutions through research based on their freewheeling thinking and to the development of scientific research the entire country. Therefore, the concept of self-motivated research activities by young researchers is introduced in the KAKENHI scheme in this call for proposals.

For details refer to the following.

"Implementation Guidelines for Self-motivated Research Activities by Young Researchers Employed with Competitive Research Funds" (February 12, 2020, Agreement of the Liaison Meeting of Related Offices and Ministries on Competitive Research Funds)

https://www.mext.go.jp/amenu/shinkou/torikumi/1385716 00001.htm

### <Important Point 2>

JSPS Research Fellows (DC) and JSPS International Research Fellows are not eligible for KAKENHI application. In general, graduate students are not eligible either (See the notes below for exceptions.). Therefore, an individual with the status of student in a research institution is not eligible even if he/she also holds a position to conduct research in that or other research institution.

- (Note 1) The term "student" as defined here does not include such an individual who has a position to conduct research in his/her research institution, as the main job (e.g., university teaching staff, researcher belonging to company, etc.), and holds a student status at the same time.
- (Note 2) If JSPS Research Fellows (SPD, PD, RPD, or CPD) meet the following application requirements at their research institutions which they register as their host research institutions, they can also apply only from the host research institutions.

### <Important Point 3>

The PIs and the Co-Is constitute the "members of funded projects," as stipulated in the Law on the Improvement of the Administration of the Budget for Grants-in-Aid (1955, Law no. 179). In an event that they have committed improper grant spending, fraudulent grant acquisition, research misconduct, etc. the eligibility for KAKENHI application will be suspended for a period of time specified by the rule.

In the following cases, an individual registered in the e-Rad system as "eligible for KAKENHI

application" may be subject to different treatment.

- •In case the research institution to which the individual belongs has made a judgement that it is not appropriate to let the individual conduct the said research activity as a part of his/her work within the institution, the institution may withhold the submission of his/her KAKENHI proposal, or may withhold the formal application for grant delivery of a provisionally adopted KAKENHI grant resulting in declination of the grant in question.
- •In case a KAKENHI recipient has failed to submit the "Report on the Research Achievements" that is due after the completion of the research period of his/her KAKENHI without any good reason, no new KAKENHI grant(s) will be delivered to him/her, even if the grant(s) have been provisionally adopted. Moreover, if a KAKENHI recipient has failed to submit the "Report on the Research Achievements" by the due date, then the delivery of KAKENHI grant(s) for that fiscal year will be suspended.

### (2) Confirmation of the Researcher Information Registered in the e-Rad System

A researcher who intends to submit a research document proposal as the PI to any of the KAKENHI categories for which "Call for Proposals" is announced, must carry the eligibility for KAKENHI application at the time of submission of the "Research Proposal Document" from his/her research institution to JSPS, and must be registered in the e-Rad system as such.

Therefore, it is important for the researcher to ascertain proper registration of his/her Researcher Information in the e-Rad system.

The registration in the e-Rad system is handled by the research institution to which the researcher belongs. The researcher should check with the administrative section of his/her institution about the registration procedures including the registration deadline within the institution, the method of confirmation of the current contents of registration, etc. If any of the entry items (such as "affiliation", "position etc.) of the researcher who has been already registered in the e-Rad system need updating, they should be duly completed.

### (3) Obtainment of an ID and a Password for the Electronic Application System

When the research institution completes the e-Rad registration of a researcher, an ID and a password will be issued for the researcher. The researcher can access the KAKENHI Electronic Application System using the ID and password and prepare the Research Proposal Document. The ID and password issued to a researcher remain valid after he/she moves to another research institution. Every researcher should exercise due care in handling his/her ID and password so as

### 2. Restrictions on Parallel Grant Application/Receipt

to prevent their leakage and abuse.

A researcher who intends to submit research proposal(s) to KAKENHI should be well acquainted with the "Restrictions on Parallel Grants Application/Receipt" before starting

preparation of research proposal document(s) to check if applications to the intended categories are permitted.

### (1) The Basic Policy for Restriction on Parallel Grant Application/Receipt

KAKENHI consists of different "Research Categories" and "Application Sections" set on the basis of budget scale, content, and other factors of the intended research, so as to meet various needs and research styles of the applicants.

On the other hand, in consideration of the necessity to support many excellent researchers with limited funding resources, and of the possible detrimental influence of overcrowding applications on the proper management of the review process, the "Rules for Restrictions on Parallel Submission of Research Proposals" have been set up, according to the following basic principles. Restrictions on parallel grant application/receipt do apply to the current round of call for proposals.

- ① Give considerations so as to ensure that as many excellent researchers as possible can be supported with limited funding resources.
- ② Give considerations so as to ensure that the number of applications does not become excessive in comparison with the review scheme of each research category.
- 3 The restrictions to be enforced are primarily directed to the applicant as Principal Investigator (PI) who bears all responsibility for the implementation of the research project(s). In some cases such as the research categories with large budget scale, however, the restrictions may be also extended to individuals as the Co-Investigator (Co-I).
- The restriction on parallel submission of research proposals and the restriction on simultaneous receipt of grants are separately set on each of the KAKENHI categories, in accordance of the basic concepts outlined above and by taking into consideration the purpose, characteristics and other factors of each KAKENHI category

# Accordingly, the applicant should be well acquainted with the description the rules given below, and the "Table of Restrictions on Parallel Grants Application/Receipt" (see page 15-17).

In case a particular research project falls under the concept of "unreasonable duplication" as put forward in the "Guidelines on the Proper Implementation of Competitive Funding" below, it may be judged as such in the review process. Therefore, the applicant should take due precautions in preparing his/her research proposal document.

### (2) Restrictions on Parallel Grant Application/Receipt

Note the below points for the application in addition to referring the "Table of Restriction on Parallel Grant Application/Receipt" (see Attached Table 1).

1) You can propose no more than one project for the Fostering Joint International Research (B) either as a Principal investigator or a Co-Investigator (see page 2). A researcher carrying KAKENHI eligibility through more than one research institution can submit

application through either of the research institutions.

reviewed.

- 2) If you have received the provisional grant decision of Specially Promoted Research (provisional grant decision is planned on late May) or Scientific Research (S) (provisional grant decision is planned on early July) and you have conducted the formal application for grant delivery, research project for Fostering Joint International Research (B) will not be reviewed after you applied.
- 3) Even after a submitted proposal has been duly filed in the electronic application system, it may be eliminated from the subsequent review process by the rule of restriction on parallel grant application/receipt. The applicant should check against such possibility before submitting the research proposal document.
  Be careful enough that if the researcher participates in multiple project members and submits the research projects to JSPS, all the research projects applied will not be
- 4) Even for the cases in which parallel grant application/receipt is not prohibited by the rules, the applicant should give a careful consideration so as not to fall in such situation that he/she cannot carry his/her responsibility as PI or Co-I, by committing him/herself to
  - "Elimination of Unreasonable Duplication and/or Excessive Concentration in the Grant Allocation" mentioned on following guideline.

too many research projects. The applicant should be well acquainted with the content of

5) There are no restrictions on parallel grant application/receipt between KAKENHI and other competitive funding schemes. Still, applicants should read the description in the column "Eliminate Unreasonable Duplication and/or Excessive Concentration in the Grant Allocation" on following guideline.

# (3) Special Provisions for the Restriction on Parallel Grant Application/Receipt (Handling of the Restrictions on Parallel Grant Application/Receipt in relation to Extension of the Research Period)

- 1)When a PI of an on-going project of KAKENHI (Multi-year Fund) or KAKENHI (Partial Multi-year Fund) opts to use the extension of the research period in the final FY (except in the case of maternity/childcare leave, research stay abroad, etc., the restriction on parallel grant application/receipt does not apply between the on-going project and a new research proposal of Fund for the Promotion of Joint International Research (Fostering Joint International Research (B)).
- 2) On the other hand, the restriction on parallel grant application/receipt does apply between the

new research proposal of Fund for the Promotion of Joint International Research (Fostering Joint International Research (B)) and other new research proposal(s) or other on-going project(s) which has been called for proposals by the call for proposals of this research category (hereinafter referred to as "KAKENHI already called for") by the same PI.

### (\*) Elimination of Unreasonable Duplication and Excessive Overconcentration in Grant Allocation

"Guidelines on the Proper Implementation of Competitive Funding" -Extract-

(Agreement of the Liaison Meeting of Related Offices and Ministries on Competitive Funding, Dated September 9, 2005 (Revision: June 22, 2017))

- 2. Elimination of Unreasonable Duplication and/or Excessive Overconcentration in the Grant Allocation
- (1) Basic Policy of the Unreasonable Reduplication and Excessive Overconcentration
  - ① In the "Guidelines", "Unreasonable Duplication" refers to a situation in which more than one competitive funds are unnecessarily and duplicative allotted to one and the same research project by one and the same researcher. Either of the following cases falls under "Unreasonable Duplication".
    - OCases where simultaneous applications have been made to more than one competitive funds for substantially the same research project, and where these research projects are redundantly adopted.
    - OCases where an application has been made again for substantively the same research project as another project that has already been adopted, and for which the allotment of competitive funding has already been completed.
    - OCases where there is duplication in the use of research funds among more than one research projects.
    - OOther cases corresponding to those above.
  - ② In these guidelines, "Excessive Concentration" is a situation in which the entire research funds that are allotted to one and the same researcher or research group (hereinafter called "researcher, etc.") in the fiscal year in question exceeds the limit within which they can be used effectively and efficiently, and in which the research funds cannot be used within the research period. Either of the following cases falls under "Excessive Concentration".
    - OCases where, in the light of the abilities of the researcher, etc. and the research methods, etc., excessive research funds are allotted.
    - OCases where, in comparison with the effort (the time allocation rate (%) of time necessary for the implementation of the research activities with the entire working time of researcher) that is being allotted to the research project in question, excessive research funds are allotted.
    - OCases where the purchase of unnecessarily expensive equipment is carried out.
    - Other cases corresponding to the cases mentioned above.

#### Table of Restriction on Parallel Grant Application/Receipt Attached Table 1

1) Restriction on Parallel Grant Application/Receipt for the KAKENHI already called for and Fund for the Promotion of Joint International Research (Fostering Joint International Research (B))

OPrincipal Investigator of the KAKENHI already called for (New Proposal/Continued)

→ Fostering Joint International Research (B) Fostering Joint International Research Column B (B) New Proposal Column A PΙ Co-I New Proposal Specially Promoted Research Continued PΙ ▲ ▲ Scientific Research (S) Continued PΙ PΙ Proposal Scientific Research PΙ Continued (A) Continued PΙ ▲ (\*) In case you have applied for Fostering Joint International Proposal General Research (B) as a Continued Principal Investigator, you cannot apply for Overseas Scientific Investigation (\*) PΙ Continued Fostering Joint International Research (A) to be called for Generative Research Fields Continued PΙ proposals on July 2021. New Proposal PΙ General Scientific Research Continued Continued Young Scientists(A) Continued PΙ PΙ ▲ Young Scientists(B) Continued PΙ **Early-Career Scientists** PΙ  $\blacktriangle$ Continued PΙ Proposal Pioneering Continued PΙ Challenging Research PΙ Proposal Continued Challenging PΙ Continued **Exploratory Research** Proposal Research Activity Start-up Continued PΙ

OCo-Investigator of the KAKENHI already called for (New Proposal/Continued)

	→ Fostering Joint I			nternational Research (B)	
		Colun	ın B	Internation	ng Joint al Research B)
				New P	roposal
Column A				PI	Co-I
Specially Pron		New Proposal	Co-I		
Research		Continued	Co-I		
Scientific Resea	rch (S)	New Proposal	Co-I		
Scientific Resea		Continued	Co-I		
	General	New Proposal	Co-I		
Scientific Research (A)	General	Continued	Co-I		
	Overseas Scientific Investigation (*)	Continued	Co-I		
	General	New Proposal	Co-I		
Scientific Research		Continued	Co-I		
(B)	Overseas Scientific Investigation (*)	Continued	Co-I		
	Generative Research Fields	Continued	Co-I		
	General	New Proposal	Co-I		
Scientific Research (C)		Continued	Co-I		
	Generative Research Fields	Continued	Co-I		
Challenging	Pioneering	New Proposal	Co-I		
		Continued	Co-I		
Research	Exploratory	New Proposal	Co-I		
		Continued	Co-I		
Challengin Exploratory Re		Continued	Co-I		

Blank cell: The researcher can apply for both research projects.

Continued

JSPS Fellows

(JSPS Research Fellow)

 $\blacktriangle$ 

<sup>×:</sup> The researcher can only apply for one research project (in case he or she applied for a research project mentioned in column A, he or she cannot apply for a research project mentioned in column B).

<sup>▲:</sup> The researcher cannot apply for a research project mentioned in column B (He or she only implements the research of a continued research project mentioned in column A).

<sup>■:</sup> The researcher can apply for both research projects. However, in case both are adopted, he or she only implements the research of the research project in A.

<sup>□:</sup> The researcher can apply for both research projects. However, in case both are adopted, he or she only implements the research of the research project in B.

<sup>\*</sup>A new research project mentioned in column A is related to the research project applied for the Grants-in-Aid for Scientific Research (FY2021).

2) Restriction on Parallel Grant Application/Receipt for Fund for the Promotion of Joint International Research /Fund for the Promotion of Joint International Research (Fostering Joint International Research (B))

OFund for the Promotion of Joint International Research → Fostering Joint International Research (B)

	Colun	nn B	Fostering Join Resear	t International rch (B)
			New Proposal	
Column A			PI	Co-I
Fostering Joint International	New Proposal (*)	PI	×	
Research (A)	Continued	PI	×	
Fostering Joint International Research	Continued	PI	×	
	New	PI	×	×
Fostering Joint International	Proposal	Co-I	×	×
Research (B)	Continued PI Co-I	PI	<b>A</b>	<b>A</b>
		Co-I	<b>A</b>	<b>A</b>
Home-Returning Researcher	Continued	PI		
Development Research	Continued	Co-I		

<sup>(\*)</sup> In case you have applied for Fostering Joint International Research (B) as a Principal Investigator, you cannot apply for Fostering Joint International Research (A) to be called for proposals on July 2021.

Blank cell: The researcher can apply for both research projects.

- ×: The researcher can only apply for one research project (in case he or she applied for a research project mentioned in column A, he or she cannot apply for a research project mentioned in column B).
- ▲: The researcher cannot apply for a research project mentioned in column B (He or she only implements the research of a continued research project mentioned in column A).
- : The researcher can apply for both research projects. However, in case both are adopted, he or she only implements the research of the research project in B.

3) Restriction on Parallel Grant Application/Receipt Scientific Research on Innovative Areas / Transformative Research Areas and Fund for the Promotion of Joint International Research (Fostering Joint International Research (B))

OScientific Research on Innovative Areas (New Proposal/Continued) → Fostering Joint International Research (B)

			Column B	Fostering Join Resear	
				New P	roposal
Colur	nn A			PI	Co-I
ive Areas ch area)	Administr ative group (*)	Continued	PI		
on Innovati osed resear	Planned	Continued	PI, Co-I		
Scientific Research on Innovative Areas (Research in a proposed research area)	Publicly offered research	New Proposal	PI		
Scientific (Research	Pub offe rese	Continued	PI		

<sup>(\*)</sup> The "International Activities Supporting Group" has the same restrictions on duplications as the "Administrative Group".

○Transformative Research Areas (New Proposal) → Fostering Joint International Research (B)

			Column B	Fostering Join Resear	t International rch (B)
				New P	roposal
Colur	mn A			PI	Co-I
	Administrative group	New Proposal	PI		
rmative h Areas	Admini	Continued	PI		
Transformative Research Areas (A)	Planned	New Proposal	PI, Co-I		
	Pla	Continued	PI, Co-I		
	Administrative group	New Proposal	PI		
Transformative Research Areas (B)	Admini	Continued	PI		
Transfo Researc (F	Planned	New Proposal	PI, Co-I		
	Planned	Continued	PI, Co-I		

Blank cell: The researcher can apply for both research projects.

<sup>×:</sup> The researcher can only apply for one research project (in case he or she applied for a research project mentioned in column A, he or she cannot apply for a research project mentioned in column B).

<sup>▲:</sup> The researcher cannot apply for a research project mentioned in column B (He or she only implements the research of a continued research project mentioned in column A).

<sup>□:</sup> The researcher can apply for both research projects. However, in case both are adopted, he or she only implements the research of the research project in B.

## 3. Preparation of the KAKENHI Application Form (Research Proposal Document and Letter of Intent)

Grants-in-Aid for Scientific Research is a competitive funding intended to provide financial support for creative and pioneering research conducted by individual researchers. Therefore, the contents of the Research Proposal Document must be original planned by the applicant.

In preparing Research Proposal Document, plagiarism and/or misappropriation of the research contents of others are strictly impermissible. Applicants must comply with research ethics.

For submission of a research proposal, the applicant (PI) has to complete the relevant Research Proposal Document and Letter of Intent from overseas researcher. The Research Proposal Document consists of two parts: "Items to be entered in the Website" and "Forms to be uploaded as an attached file".

The PI (applicant) should complete the Research Proposal Document (PDF file) by entering the "Items to be entered in the Website" and by uploading the "Forms to be uploaded as an attached file" to the Electronic Application System. Then he/she should submit the Research Proposal Document to the administrative section of his/her research institution, by the deadline set by the institution. In addition to the Research Proposal Document, applicant should submit the Letter of Intent from overseas researcher.

Preparation and submission of the KAKENHI Research Proposal Document and Letter of Intent from overseas researcher should follow the procedures detailed below.

### (1) Revision of the Research Proposal Document

In the process of the Reform of the KAKENHI Review System, Research Proposal Document has been reviewed since FY 2018 call (announced in September 2017). The revision to the FY2019 call (announced in September 2018) includes the instructions on describing achievements in the column of research achievements.

In the Fund for the Promotion of Joint International Research (Fostering Joint International Research (B)), several changes in the Research Proposal Document such as follows have been made from the FY2019 call for proposals.

In preparing the research proposal document, read carefully the Application Procedures for Grants-in-Aid for Scientific Research-KAKENHI- (Supplement) "Forms/Procedures for Preparing and Entering a Research Proposal Document".

- Based on the purpose of this category, revisions have been made on the structure of Research Proposal Document. Also, the contents of description an applicant should provide in each column about his/her concrete research plan for overseas joint international research project including its significance and necessity have been specified.
- The "Research Achievements of the Principal Investigator (PI) and Co-Investigator(s) (Co-I(s))" column in the Research Proposal Document is to be changed to the "Applicant's

Ability to Conduct the Research and the Research Environment" column in accordance with the rating elements.

Furthermore, the summary on the discussion related to the revision of the "Applicant's Ability to Conduct the Research and the Research Environment" column such as in the Subdivision on Research Grant Screening Section of the Academic Deliberation in the Subdivision on Science, Council for Science and Technology is as follows.

(Reference) The summary on the discussion including in the Subdivision on Research Grant Screening Section of the Academic Deliberation in the Subdivision on Science, Council for Science and Technology

### (Problem recognition, etc.)

- Ouring the review process, there seems to be a reality which is easily enable to distort what an application and a review per se should be, including the possibility to enumerate unnecessarily the achievements irrelevant to the research project in the "Research Achievements" column.
- There seems to be a possibility that the "Research Achievements" column gives a wrong recognition that without filling in the column spaces with many of research achievements as possible, it might be disadvantage for applicants at the review.
- There is still a room for consideration on the "way to make applicants describe" their research achievements and so on although it is necessary to verify them to assess their ability to conduct the research corresponding to the shared responsibility of the Principal Investigator and the Co-Investigators.
- o If there might be a possibility to provide applicants and others with a recognition that as if a performance over-emphasis principle be prevailing at the review in the KAKENHI, a rectification of it should be attempted as far as possible and a consideration to contrive to do so is required.
- In case making continuous use of the "Research Achievements" column, a consideration
  enabling applicants to properly describe information necessary to assess their ability to
  conduct the research is required. (An impression as if the "filling in the column is just an
  important thing" should be dispelled.)
- Regarding the assessment on the ability to conduct the research by using such as the research achievements, an attempt to foster a correct recognition for both sides of applicants and reviewers is required.

### (Basic policy, etc. for the revision of the Research Proposal Document)

- O At the review of the KAKENHI, as for research projects proposed by the Principal Investigator, in association with considering a scientific significance and creativity, a clarification of research objectives and so on, it is also intended to assess the researchers' ability to conduct the research strictly and to select appropriate research projects.
- The positioning of the research achievements in the Research Proposal Document is for judging a practical feasibility of the research described in the Research Proposal Document before rolling out the research.
- o Based on the understandings above, the research achievements should be clearly defined that they are regarded as verifying the ability to conduct the research for the research plan.

### (2) Preparation of KAKENHI Research Proposal Document and Letter of Intent

For the preparation of the KAKENHI Research Proposal Document and Letter of Intent, <u>the</u> <u>applicant must first access the Electronic Application System using his/her e-Rad ID and Password.</u>

### On the Research Proposal Document

The KAKENHI Research Proposal Document consists of the following two parts:

#### Items to be entered in the Website:

Items to be directly entered by the PI (applicant) on the website of the KAKENHI Electronic Application System

### Forms to be uploaded:

A part containing such entries as "Summary, Significance and Necessity of the Joint International Research, etc.", "Research Objectives, Research Method of the Joint International Research, etc." and other items to be prepared by downloading the form from the "Grants-in-Aid for Scientific Research-KAKENHI-" page within the JSPS website (URL:https://www.jsps.go.jp/j-grantsinaid/35\_kokusai/04\_kyoudoub/download.html), and by uploading the filled form to the KAKENHI Electronic Application System so as to compile a PDF file of the research proposal document. (Paper-based applications will not be accepted.)

	F	Research Proposal Document	
Research category Application Section	Items to be entered in the Website (First part)	Forms to be uploaded as an attached file (File ID)	Items to be entered in the Website (Second part)
Fund for the Promotion of Joint International Research (Fostering Joint International Research (B))	To be entered in the electronic application system (Title of research project, Fundamental data on the research project such as total budget, Data on the project members, etc.)	S-63-1	To be entered in the electronic application system (Title of research project, Fundamental data on the research project such as total budget, Data on the project members, etc.)

<sup>\*</sup> Forms can be downloaded from the "Grants-in-Aid for Scientific Research - KAKENHI" page within the JSPS website (URL: https://www.jsps.go.jp/j-grantsinaid/35\_kokusai/04\_kyoudoub/download.html ) even before the obtaining of the e-Rad ID and password.

### About the Letter of Intent

The Letter of Intent is to be collected from an overseas joint researcher in time for the application to confirm that applicant jointly conducts the research project with the overseas researcher. You can download the form from JSPS website(URL:<a href="https://www.jsps.go.jp/j-grantsinaid/index.html">https://www.jsps.go.jp/j-grantsinaid/index.html</a>). Applicant should fill in the necessary information such as Outline of the Research Project, request the overseas joint researcher (the principal researchers of the group in case a group of researchers) to confirm the contents and give a signature. When you receive it over an electronic file, please save the information on the related correspondences including email messages. (Note

that applicants are requested to upload the letter of intent only.) When you receive it on paper, please be sure to convert the form to PDF before uploading it to the electronic application system. Applicants are requested to upload just one of the letters written by the main overseas joint researchers in case s/he receives several letters.

Uploaded Letter of Intent will be used in review process as a part of the Research Proposal
Document. Please inform a researcher to whom you request to write Letter of Intent the
following: Personal information of overseas Co-Investigator given in Letter of Intent and
Research Proposal Document will be used for administrative tasks of KAKENHI grants;
 The above includes providing personal information to external contractor(s) in charge of the

electronic processing and management of KAKENHI data.

You can also refer to next page (3) Electronic Submission of the Research Proposal Document, 4).

 Until the both Research Proposal Document and Letter of Intent have been uploaded, applicant cannot submit (send) them to his/her research institution.

### (3) Electronic Submission of the Research Proposal Document

1) An applicant should prepare his/her Research Proposal Document (PDF file) by entering the "Items to be entered in the Website" and by uploading the separately prepared "Forms to be uploaded" to the electronic application system, following the instructions in the "FY2021 Procedures for Preparing and Entering a Research Proposal Document for "Fund for the Promotion of Joint International Research (Fostering Joint International Research (B))" and "FY2021 Procedures for Preparing and Entering a Research Proposal Document (Items to be entered in the Website) (Fund for the Promotion of Joint International Research (Fostering Joint International Research (B)))".

In addition, applicant should upload the Letter of Intent converted to PDF file to the electronic application system.

- 2) The compiled books of the submitted KAKENHI Research Proposal Documents to be sent to the reviewers are <u>in black-and-white (gray scale) print</u>. Therefore, in preparing the Research Proposal Document, the applicant should pay attention to the clarity of the figures when printed in gray scale.
- 3) The Research Proposal Documents and Letters of Intent are collected and submitted to JSPS by the research institution to which the PIs (applicant) belong. Therefore, the applying PI should submit his/her Research Proposal Document to the administrative section of his/her research institution by the deadline set by the institution. (It is not allowed to submit the

### Research Proposal Document directly to JSPS.)

Before submission, the applying PI should carefully check the contents of the Research Proposal Document (PDF file) and Letter of Intent he/she prepared, and subsequently proceed to the "Check Completed and Submission" stage of the submission process. (This amounts to submitting the Research Proposal Document (PDF file) and Letter of Intent to the administrative section of his/her research institution.) After the "Approval" process by his/her institution, no further corrections or modifications to the submitted Research Proposal Document (PDF file) and Letter of Intent is possible.

4) The personal information included in the Research Proposal Document will be used for the elimination of "unreasonable duplication and/or excessive concentration in the allocation of competitive funds" and for the appropriate funding of KAKENHI grants. (This includes providing the data to external contractor(s) in charge of electronic processing and management of the KAKENHI data.) The information included in the Research Proposal Document will also be provided to the e-Rad system. (The information registered in the e-Rad system is utilized for proper assessment of research and development by national funding, development of effective and efficient comprehensive strategy, planning and development of resource allocation policy, etc. The information will be supplied to the Cabinet Office through the e-Rad system. The applicant may be requested to cooperate in verification of the information and other related works.)

The information on the adopted KAKENHI projects (the title of research project, the name of PI and his/her affiliated research institution, the grant money to be delivered, research period, and the summary of research, etc.) is categorized as "information planned to be made public", as laid down in Article 5, paragraph 1, item 1 of the "Act on Access to Information Held by Independent Administrative Agencies" (Act No. 140 of 2001). The information will be made public through press release materials, the database of Grants-in-Aid for Scientific Research (KAKEN) of the National Institute of Informatics, and other means.

The researchers and their affiliated research institutions are requested to carry out the application procedures (including 3) above) with full understanding of the information handling (utilization, provision and disclosure) stated above.

### Important Checkpoints of the Research Proposal Document

In preparing a Research Proposal Document, the applicant should pay attention to the following points among others, so as to avoid "outright rejection by incompleteness of the research proposal document".

### 1. Qualification as a KAKENHI project

The following kinds of research plans fall outside the scope of funding target:

- A) A research plan which merely aims at purchasing ready-made research equipment.
- B) A research plan whose purpose is to build a large-size research facility or equipment which is more appropriate to be funded by other resources.
- C) A research plan whose purpose lies at developing and selling goods and/or services (including market research associated with such as them).
- D) An entrusted research conducted as regular business.
- E) A research plan with a yearly budget less than 100,000 yen.

### 2. Eligibility of the Project Members

The PI (see page 27, 1) may organize a research team with appropriate combination of Co-Investigator(s) (Co-I) (see page 27, 2), and Research Collaborators(s) (see page 29, 3), as needed by the nature of the research project.

As is the case for PI, Co-Investigator(s) is also subject to verification of their KAKENHI eligibility by their respective research institute by the time of proposal submission (See Notes below).

On the other hand, to be a Research Collaborators, registration to the e-Rad system is not a requirement.

### < Requirements >

- 1) The applicant must be an individual belonging to a research institution with a job assignment including research activity within the said institution. (Whether the job is paid/unpaid, or full-time/part-time is irrelevant. It is not a prerequisite of eligibility that the research activity constitutes the main part of his/her job.)
- 2) The applicant must be actually engaged in a research activity in his/her research institution. (Those who are only engaged in research assisting jobs are ineligible.)
- 3) The applicant must not be a graduate student or any other categories of student. (An individual who has a position in a research institution with a research activity as his/her main job (e.g., a university teaching staff, a researcher belonging to a company, etc.), and holds a student status at the same time is ineligible.)
- (\*): Here, the research institution must be such that designated according to the Article 2 of the "Rules for the Handling of Grants-in-Aid for Scientific Research" (issued by the MEXT)

(Reference) Requirements that the research institution must meet:

#### < Requirements >

- The research institution must authorize the research project for which KAKENHI is granted, as its proper activity.
- The research institution must take responsibility for management and accounting of the KAKENHI delivered to its researcher staffs.

- (Note 1) A JSPS Research Fellow (SPD, PD, RPD or CPD) who meets the above application requirements at his/her host research institution can participate in a KAKENHI research project as Co-I. There are no restrictions on the research categories in which he/she can participate as Co-I unlike in the case of participating as PI.
- (Note 2) JSPS Research Fellows (DC), International JSPS Fellows and graduate students (or students of any other category) cannot be a PI or Co-I of a KAKENHI project.

### <Important point 1>

KAKENHI employee is generally bound by their employment contract to concentrate on the research work relevant to the employment-related work specified in his/her employment contracts. Therefore, such a KAKENHI employee cannot apply for his/her own KAKENHI project which is to be conducted within the working hours of his/her employment.

However, provided that he/she can clearly demarcate his/her own research hours from the working hours of employment and intends to conduct his/her own research project during the working hours on his/her own initiative, the KAKENHI employee can submit his/her own KAKENHI proposal, on the condition that the following points are verified by his/her research institution. In this case, he/she can apply as PI, or participate to other KAKENHI project(s) as Co-I.

- The KAKENHI employee is granted on his/her employment contract, to conduct research on his/her own initiative, besides the employment-related work.
- The employment-related work and the work devoted to the research on his/her own initiative are clearly demarcated in regard to the working hours and the effort.
- The KAKENHI employee is able to secure enough research hours (besides the working hours for his/her employment-related work) to be allotted to his/her own KAKENHI project.

[Self-motivated research activities by an "early-career scientist" employed with KAKENHI]

A young researcher (\*) who is employed with KAKENHI funds (KAKENHI employee) and meets the following conditions, may conduct his/her own research during the working hours assigned for the employment-related work, after going through the necessary procedures set by his/her research institution. He/she can apply for KAKENHI as a PI or become a Co-I.

- (1) The young researcher desires on his/her own will to conduct his/her own research.
- (2) The PI or Co-I (the employer of the young researcher) decides that the said research has a positive contribution to the promotion of the funded research project for which he/she is employed, and the research institution approves the decision.
- (3) The PI or Co-I judges that the efforts to be spared by the young researcher to the said research is within the extent that do not cause any hindrance to the execution of the funded research project for which he/she is employed, and the research institution approves the judgement. (The upper limit of the efforts to be spared to the self-motivated research is 20 percent of the efforts to be put into the funded research project for which he/she is employed.)

\* In this context, "young researcher" is defined as an individual who is age 39 or under, or less than 8 years after Ph.D. acquisition as of April 1 of each fiscal year, and whose job assignment includes research activities. When applying for Grants-in-Aid for Scientific Research (KAKENHI) he/she must meet the eligibility requirements for KAKENHI application.

(Reference) Views on the self-motivated research activities by the KAKENHI employee

Attachment to the "Proposals of the Grants-in-Aid for Scientific Research (KAKENHI) in Fiscal Year 2020" (March 19, 2020) (Excerpt)

https://www.jsps.go.jp/j-grantsinaid/06 jsps info/g 200316/index.html

Grants-in-Aid for Scientific Research (hereinafter referred to as "KAKENHI") is a funding scheme that is intended to promote development of scientific research (based on original ideas of researchers), encompassing basic to applied researches in all fields ranging from humanities and social sciences to natural sciences. Scientific research is a source of innovation i.e., value creation based on new knowledge and has a vital role in nurturing human resources for leading a knowledge-based society broadly. It is particularly important to foster young scientists who are responsible for the next generation in order that the scientific research may sustainably exercise its role in the society.

It enables young researchers employed with a KAKENHI grant to conduct self-motivated research activities (including research activities with other research funds and activities helping research/management capacity building; hereinafter the same). Allowing them to conduct research activities in an independent and free research environment contributes not only to fostering young researchers, but also to the further development of the KAKENHI projects of their research institutions through research based on their freewheeling thinking and to the development of scientific research the entire country. Therefore, the concept of self-motivated research activities by young researchers is introduced in the KAKENHI scheme in this call for proposals. For details, refer to the following:

"Implementation Guidelines for Self-motivated Research Activities by Young Researchers Employed with Competitive Research Funds" (February 12, 2020, Agreement of the Liaison Meeting of Related Offices and Ministries on Competitive Research Funds)

 $https://www.mext.go.jp/a\_menu/shinkou/torikumi/1385716\_00001.htm https://www.mext.go.jp/amenu/shinkou/torikumi/1385716\_00001.htm https://www.mext.go.jp/amenu/shinkou/torikumi/shinkou/shinkou/torikumi/shinkou/torikumi/shinkou/torikumi/shinkou/torikumi/shinkou/torikumi/shinkou/torikumi/shinkou/torikumi/shinkou/torikumi/shinkou/torikumi/shinkou/torikumi/shinkou/torikumi/shinkou/torikumi/shinkou/torikumi/shinkou/torikumi/shinkou/torikumi/s$ 

<Important point 2>The PIs and the Co-Is constitute the "members of funded projects", as stipulated in the Law on the Improvement of the Administration of the Budget for Grants-in-Aid (1955, Law no. 179). In an event that they have committed improper grant spending, fraudulent grant acquisition, research misconduct, etc. the eligibility for KAKENHI application will be suspended for a period of time specified by the rule.

In the following cases, an individual registered in the e-Rad system as "eligible for KAKENHI

application" may be subject to different treatment.

- In case the research institution to which the individual belongs has made a judgement that it is not appropriate to let the individual conduct the said research activity as a part of his/her work within the institution, the institution may withhold the submission of his/her KAKENHI proposal, or may withhold the formal application for grant delivery of a provisionally adopted KAKENHI grant resulting in declination of the grant in question.
- In case a KAKENHI recipient has failed to submit the "Report on the Research Achievements" that is due after the completion of the research period of his/her KAKENHI without any good reason, no new KAKENHI grant(s) will be delivered to him/her, even if the grant(s) have been provisionally adopted. Moreover, if a KAKENHI recipient has failed to submit the "Report on the Research Achievements" by the due date, then the delivery of KAKENHI grant(s) for that FY will be suspended.

### 1) Principal Investigator (PI) (Applicant)

(A)Principal Investigator is the main recipient of the grant who bears full responsibility for the implementation of the research project (including summarization of the research achievements). An individual who is anticipated to become unable to carry through the PI's responsibility over the entire research period due to, for example, loss of the KAKENHI eligibility caused by PI's own accord, should refrain from becoming a PI. (See Note below)

### (Note)

The Principal Investigator is a researcher who plays the central role in the implementation of the research plan and thus bears a heavy responsibility. An individual who is anticipated to lose his/her eligibility for KAKENHI application during the research period due to his/her own accord so that is anticipated to be unable to carry through the responsibility, should refrain from becoming a Principal Investigator. Substitutions of the PI of an on-going KAKENHI project are not permitted.

# (B) When organizing project members, Principal Investigator must obtain a consent to become a Co-Investigator from the researcher via electric application system in advance so that the relationship between the Principal Investigator and the Co-Investigator is clear.

(C)The PI must be registered in the e-Rad system as "Eligible for KAKENHI Application". It is also required that he/she is *not* designated as "ineligible for grant receipt" in the fiscal year covered by a call for proposals(suspension of eligibility), as a penalty for such misconducts as improper grant spending, fraudulent grant acquisition or research misconduct associated with KAKENHI or any other competitive funding.

### 2) Co-Investigator (Co-I)

- (A) The Co-Investigator is a recipient of the grant who, in cooperation with the PI, bears responsibility for the implementation of the research project in accordance with the clear share of his/her roles. The Co-I must be a member of the project who receives a share of the grant based on the contents of the share as a recipient of the grant. (This rule applies even when the Co-I belongs to the same institution as the PI.)
  - An individual who is anticipated to become unable to carry through the Co-I's responsibility over the entire research period due to, for example, the loss of the KAKENHI eligibility caused by Co-I's own accord, should refrain from becoming a Co-I.
- (B) The Co-I must be registered in the e-Rad system as being "Eligible for KAKENHI Application". It is also required that he/she is *not* designated as being "ineligible for grant receipt" in the fiscal year covered by a call for proposals (a suspension of eligibility), as a penalty for such misconducts as an improper grant spending, a fraudulent grant acquisition or a research misconduct associated with the KAKENHI or any other competitive funding.

### < About the Process of Participation of Co-Investigator in Project Members >

A consent process to become a Co-Investigator is conducted via the electronic application system if the applicant adds a Co-Investigator to project members. Following processes for both Principal Investigator and Co-Investigators are necessary in the application process.

[Actions to be taken by the Principal Investigator]

• By submitting (sending) Research Proposal Document to his/her research institution, Principal Investigator must enter the information on the researcher whom Principal Investigator wants to add to the project members in the "Project Members List" column on the "Application Information Input" screen, request the researcher to become a Co-Investigator, and obtain a consent from the Co-Investigator-to-be.

[Actions to be taken by the researcher who is requested to become a Co-Investigator]

• If the researcher is requested to become a Co-Investigator by the Principal Investigator via the electronic application system, the researcher must select "Consent" or "Dissent" after confirming the contents to be consented.

Procedures to be Performed by the Principal Investigator	Procedures to be Performed by the Co-Investigator-to-be	Procedures to be Performed by the Research Institutions to which Co-Investigator-to-be belongs
① Request to become a Co-Investigator —	② Give a consent to become a —	→ ③ Give a consent to become a
	Co-Investigator	Co-Investigator as a standpoint of
		the research institutions
The Principal Investigator requests to	The Co-Investigator-to-be is requested	The information consented by the
the researcher who is to be requested to	to participate in the project members as	Co-Investigator-to-be is shown via the
become a Co-Investigator to participate	a Co-Investigator from the Principal	electronic application system and then
in the project members as a	Investigator via the electronic	the research institutions also conducts
Co-Investigator via the electronic	application system and then the	the process such as giving consents to
application system	Co-Investigator-to-be selects a consent	him/her.
	(or a dissent).	

- The organization of the project members should be completed through all necessary procedures mentioned above to be carried out with the approximate target of **two weeks prior to the deadline for the submission of the application documents**. (All application procedures are workable on the system after two weeks prior to the deadline for the submission of the application documents. To submit (send) application documents to the research institution to which the Principal Investigator belongs, it is necessary to obtain consents from all the Co-Investigators-to-be.
- \* Please refer to the Kakenhi (Grants-in-Aid for Scientific Research) Electronic Application System Operation Manual (URL: <a href="https://www-shinsei.jsps.go.jp/kaken/topkakenhi/shinsei\_ka.html">https://www-shinsei.jsps.go.jp/kaken/topkakenhi/shinsei\_ka.html</a>) for the detailed information such as operating environments, operating methods, and so on.
- \* After the researcher has given a consent to become a Co-Investigator, the information on the Co-Investigator-to-be will be shown to the research institution to which he/she belongs via the electronic application system, and then it will be necessary to obtain a consent, etc. from the research institution as well.
  - \* Since the Principal Investigator cannot submit (send) the Research Proposal Document to his/her research institution until the research institution to which the Co-Investigator-to-be belongs gives the consent, etc., be sure to finish the process in time for the deadline of the submission.

### 3) Research Collaborator

- (A) Research Collaborator is an individual who cooperates in the implementation of a research project other than the PI and the Co-I(s).
- (B) Registration as "Eligible for KAKENHI application" in the e-Rad system is not a requirement for becoming a Research Collaborator.
  For example, following person can also participate in the research project as a Research

Collaborator: a postdoctoral researcher, a graduate student, a research assistant (RA), a JSPS Research Fellow (\*), a researcher belonging to an overseas research institution, a researcher

belonging to a corporation not designated as a research institution according to Article 2 of the Rules for the Handling of Grants-in-Aid for Scientific Research, and an individual offering research support such as technician and intellectual property specialist.

(\*) JSPS Fellows (SPD, PD, RPD or CPD) who are *not* registered as eligible for KAKENHI application in their host her research institution, and JSPS fellows (DC)

[The Participation of Early-Career Researcher to Project Members (Principal Investigator and Co-Investigator) in Fostering Joint International Research (B)]

Since this research category seeks to foster researchers who can play leading roles within the international scientific area and lead to maintain and develop the infrastructure of joint international research in medium- to long-term, participation of early-career researcher to project members (Principal Investigator and Co-Investigator) is required.

- < Application Requirements of Early-Career Researcher >
  - (1) An applicant who is less than 8 years after the acquisition of his/her Ph.D. as of April 1, 2021. (A researcher who acquired Ph.D. between April 2, 2013 and the time of proposal submission)
  - (2) An applicant who is deemed less than 8 years after acquisition of his/her Ph.D. by exempting as of April 1, 2021 (\*) the period(s) of childcare leave etc. (prenatal/postpartum break, childcare leave).
    - (\*) Calculate the sum total of the leave periods, round up the total period to the year unit and then subtract it from the number of years after Ph.D. acquisition (Example: If the applicant has taken 6-month childcare leave three times, the years to be subtracted will be 2 (1 year and 6 months → 2 years))
  - (3) An applicant who does not carry a degree, and is 39 years of age or under, as of April 1, 2021.

An applicant with the eligibility in the classification (1) or (2) must register the "Date of Ph.D. Acquisition" in the e-Rad system at the time of proposal submission. Since the registration to the e-Rad system cannot be made by the applicant him/herself, the applicant should request the administrative section of his/her institution to register the Date of Ph.D. Acquisition in the e-Rad system in time for the proposal submission. If the applicant has more than one Ph.D. degree, enter the first acquisition date.

In addition, please also note the below points for organizing project members.

- At least 3 domestic researchers should be involved in the project members (Principal Investigator and Co-Investigator) in principal including at least one early-career researcher.
- In case the project members (Principal Investigator and Co-Investigator) consists only of early-career researchers, it is eligible to organize project members consist of 2 or less early-career researchers.

#### 3 Requirements for the Appropriation of Research Expenditure

## 1) Expenditures that can be covered by direct expense

Expenditures necessary for the implementation of the research plan (including those necessary for summarization of the research achievements) can be covered by the direct expense.

\* If any of the expenditure categories (equipment costs, travel expenses, or personnel cost/honoraria) exceeds 90% of the total yearly expenditure in any FY of the research period, or if the expenditure in category Consumables or Miscellaneous constitutes a significant portion of the total expenditure, the necessity of that spending should be clarified in Research Proposal Document

## [Direct Expense of Competitive Research Funds to Cover the Costs of Assignments Other Than Research]

The cost of "buyout" (*i.e.*, the cost for hiring someone taking over a part of the duties other than research (\*) of the Principal Investigator or Co-Investigator(s)) can be covered by the direct expense so that they can secure ample amount of time for research projects (the buyout system).

\* The kinds of duties that can be covered by the buyout system are those authorized as proper jobs of the researcher at his/her research institution, excluding (i) research activities, and (ii) administrative work for institutional management. They include educational and related activities, e.g., educational activities (teaching and preparation for teaching, supervising students) and social engagement activities (medical practices, outreach activities). Activities associated with business profit are excluded.

Starting from the FY2021 Call for Proposals, the buyout system is applicable in the research categories listed below. A KAKENHI applicant who wish to use the buyout system should do so according to the buyout scheme agreed upon between him/her and his/her research institution.

When an applicant wishes to use the buyout system, enter the cost of the buyout in the "Miscellaneous expense" column, and enter the word "buyout" in the "Item" column of the Research Proposal Document form. (Please refer to the supplementary volume of "Application Procedures for Grants-in-Aid for Scientific Research—KAKENHI—" (Forms/Procedures for Preparing and Entering a Research Proposal Document).

## [Research categories subject to the buyout system]

Specially Promoted Research, Transformative Research Areas, Scientific Research on Innovative Areas (Research in a Proposed Research Area) (excluding "Platforms for Advanced Technologies and Research Resources"), Scientific Research, Challenging Research (including "Challenging Exploratory Research"), Early-Career Scientists (including "Young Scientists (A/B)"), Research Activity Start-up, Fostering Joint International Research (B), Home-Returning Researcher Development Research (limited to those who belongs to the domestic research institutions), Special Purposes.

[Research categories *not* subject to the buyout system]

Encouragement of Scientists, Publication of Scientific Research Results, JSPS Fellows, Scientific Research on Innovative Areas (Research in a Proposed Research Area) (Platforms for Advanced Technologies and Research Resources), Fostering Joint International Research (A) (including the Joint International Research before name change). As for the research category of Fostering Joint International Research (A) (including the Joint International Research before name change) it is possible to budget the cost for hiring replacements.

As for the details of the expenses covered by the buyout system and matters to be done by the research institution refer to the following.

"Amendment Enabling Direct Expense of Competitive Research Funds to Cover the Costs of Duties Other Than Research (Introduction of Buyout System)" (Oct 9, 2020, Agreement among Research Promotion Bureau, Science and Technology Policy Bureau, Research and Development Bureau and Higher Education Bureau)

https://www.mext.go.jp/a\_menu/shinkou/torikumi/1385716\_00003.htm

The objective of the buyout system is to increase the number of hours the PI (or Co-I) can devote to the funded project on the basis of his/her own needs and request. Accordingly, items such as the actual presence of the PI's (or Co-I's) needs and request, and the resulting expansion of research time devoted to the funded project (increased number of hours for research) may be subject to later inspection in relation to the grant spending. In the event that the buyout expenditure is found to be used improperly (e.g., the increase in hours devoted to the funded project is not verified), an order to return the delivered grant may be issued. Therefore, the research institution should ensure the appropriate implementation of the buyout system.

#### 2) The following kinds of spending cannot be covered by KAKENHI:

- A.Costs associated with buildings and other facilities (excluding expenditure for installations necessary for installation of research equipment purchased by the KAKENHI direct expense).
- B. Expenditures for measures to deal with accidents or disasters that occurred during the implementation of funded project
- C. Personnel cost/Honoraria for the PI or Co-I(s)
- D. Other expenditures that are apt to be covered by indirect expense\*
- \* Indirect expense which amounts to 30% of the direct expense, is intended for use by the research institution in covering expenditures needed by the research institution for the management and other things associated with the implementation of the research project. Indirect expense will be placed for all the research categories of this Call for Proposals. Applicant does not need to state the indirect expense in his/her Research Proposal Document.

## 4. Selection by the Applicant of a Desired Review Section in the Review Process

The applicant should <u>select one of the Medium-sized Section</u> from Attached Table 2 "The Review Section Table for the Grants-in-Aid for Scientific Research-KAKENHI-" (see page

## 4. Completion of Research Ethics Education Course or Other etc.

Principal Investigators and Co-Investigators taking part in a research funded by the KAKENHI, are requested to have completed properly the following procedures including research ethics, by the time they submit the formal application for grant delivery of a newly adopted research project in the FY2021 Grants-in-Aid for Scientific Research, and upon the formal application for a grant delivery, it shall be confirmed through the electronic application system whether they will have taken the research ethics education coursework, etc.

If a PI or Co-I completed the research ethics related procedures in the past, or has moved from the research institute at which he/she completed the procedure, he/she should check with the administrative section of his/her current institution for the validity of the procedure he/she conducted in the past.

## [Actions to be taken by the Principal Investigator]

- The PI must either read through and learn the teaching materials by oneself concerning the research ethics education coursework such as "For the Sound Development of Science The Attitude of a Conscientious Scientist" published by the Editorial Committee of the JSPS named "For the Sound Development of Science, the "e-Learning Course on Research Ethics [eL CoRE] or "APRIN e-learning program (eAPRIN)", or attend a lecture on research ethics conducted by research institutes based on "Guidelines for Responding to Misconduct in Research (Adopted by the MEXT on August 26, 2014), by the time of the formal application for grant delivery.
- The PI must understand thoroughly and exercise the proper research practices in conducting their research, from amongst the contents of both the statement "Code of Conduct for Scientists -Revised Version-" by the Science Council of Japan and the booklet "For the Sound Development of Science -The Attitude of a Conscientious Scientist-" issued by the JSPS, by the time of the formal application for grant delivery.
- From each Co-Investigator-to-be, the PI must
- ① obtain a consent of participation in the research project as a Co-I through the electronic application system and also a consent expressing "the completion of a seminar attendance or other kinds of coursework relevant to research ethics by the time of the formal application for the grant delivery of the research project in question", by the time of submitting (sending) the Research Proposal Document to the research institution which the PI belongs to, and;
- ② ascertain that the Co-I has actually completed the coursework such as an attendance at the lecture on research ethics by the time of the formal application for the grant delivery.

[Actions to be taken by the Co-Investigator]

• The Co-I must provide the PI with both a consent of the participation in the research project as a Co-Investigator via the electronic application system and a consent expressing "the completion

of a seminar attendance or other kinds of coursework relevant to research ethics by the time of

the formal application for the grant delivery of the research project in question".

• The Co-I must either read through and learn the teaching materials by oneself concerning the

research ethics education coursework such as "For the Sound Development of Science - The

Attitude of a Conscientious Scientist" published by the Editorial Committee of the JSPS named

"For the Sound Development of Science, the "e-Learning Course on Research Ethics [eL CoRE]

or "APRIN e-learning program (eAPRIN)", or attend a lecture on research ethics conducted by

research institutes based on "Guidelines for Responding to Misconduct in Research (Adopted by

the MEXT on August 26, 2014), and report the PI to the effect that he/she has done, by the time

of the formal application for the grant delivery by the PI.

· The Co-I must understand thoroughly and exercise the proper research practices in conducting

their research, from amongst the contents of both the statement "Code of Conduct for Scientists

-Revised Version-" by the Science Council of Japan and the booklet "For the Sound

Development of Science -The Attitude of a Conscientious Scientist-" issued by the JSPS, and

report the PI to the effect that he/she has done, by the time of the formal application for the grant

delivery by the PI.

5. Registration of the Researcher Information in Researchmap

The "Researchmap (https://researchmap.jp/)" is the Japan's largest researcher information

database as a general guide to Japanese researchers. The information on the research

achievements registered in the Researchmap is ready to be openly available over the Internet and

the database itself is linked to the e-Rad, other many university faculty databases and so on, and

also the Japanese Government as a whole is going to further utilize the Researchmap.

Furthermore, since the posted information in the Researchmap and/or the database of the

Grants-in-Aid for Scientific Research (KAKEN) is to be handled as a reference according to the

necessity in the review of the KAKENHI, the registration of the researcher information into the

Researchmap is encouraged. In addition, when doing so, make sure to register the "Researcher

Number" because the posted information is to be searched with the "Researcher Number" when

referring to the posted information in the Researchmap at the review.

< Inquiries >

Service Support Center (in charge of the "researchmap")

Department for Information Infrastructure

Japan Science and Technology Agency

Web inquiry form: https://researchmap.jp/public/inquiry/

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## 6. Cooperation to Review

The Grants-in-Aid for Scientific Research-KAKENHI- adopts a peer-review process in which the researchers selected from their own community engaged themselves in the assessment and reviewing of each research proposals on the basis of its scientific merit. The KAKENHI review is conducted thanks to the cooperation of more than 7,000 researchers as reviewers. The peer review forms the basis of the autonomy of academic community and plays an important role in ensuring quality of scientific research and its improvement. The review of applications is carried out with the constructive and mutually critical spirit of scientists and based on the purely academic value. It is no exaggeration to say that the KAKENHI review system is indispensable in supporting Japan's scientific research into the future among other research funds.

The Grants-in-Aid for Scientific Research (KAKENHI) program is supported by researchers who have responsibilities not only to conduct the funded research projects as applicants and grant recipients but also as a reviewer. It is important for researchers to find out excellent research proposals as reviewers in order to support the scientific research as is the case of putting out excellent research results with KAKENHI funds. It is expected that the above-stated understanding is share in the academic community. Furthermore, participating to the review process has an aspect of fostering researchers through enhancing their capability to conduct the objective and academic assessments based on the various views of fellow reviewers leading up to broaden their horizons.

In order to support the peer-review system of KAKENHI by the whole body of researchers by appropriately sharing the burden of proposal review without putting an extra load on some researchers. The researchers' positive participation in the review process is well appreciated when they are requested to become the KAKENHI reviewer by JSPS or MEXT in the future. JSPS has registered the Principal Investigators' information including their names and affiliated research institutions in the Database of Review Committee Candidate (approx. 136,000 entries as of FY2020) and has utilized it so as to select the fair and excellent reviewers. The request to update the registered information is made through the researchers' research institutions every April (planned), researchers' cooperation for updating is also well appreciated.

## IV. Instructions for Grant Recipients

# 1. Handling of a Research Project that is to be Continued in FY2021 (hereafter referred to as "continued research project")

For a continued research project, the PI does not need to submit any application form afresh. However, he/shehas to prepare and submit the "formal application for grant delivery and request for payment form for a research project in the second-year onwards" by March 1 for each fiscal year. In principle, it is not allowed to withdraw the continuing project and submit a new proposal. Please check the texts down below concerning the handlings of research categories other than Specially Promoted Research.

# A case in which a continued research project has proceeded beyond expectation, and the original research goal has already been reached

If the PI of the continued project decides that his/her project proceeded beyond expectation and research goal has already been reached, and he/she intends to pursue a new research development by transferring to another research category, he/she may opt to apply for the Fostering Joint International Research (B) of a new KAKENHI grant, after submitting a "Notice of Completion of Research Project" and a "Statement of Reason" (refer to the supplementary edition "Forms/Procedures for Preparing and Entering a Research Proposal Document") by May 10, 2021 (Monday). (Documents that arrive later will not be accepted.)

Note that, if the content of the "Statement of Reason" is deemed inappropriate by the review panel, the new KAKENHI proposal is excluded from the review. Even in this case, the grant for the continued research project of which the PI has already filed the "Notice of Completion of Research Project" cannot be reclaimed after the successive fiscal year(s).

# 2. Handling of Continued Research Projects Whose PI Fails to Submit the Report on the Research Achievements of his/her Other KAKENHI Project

As is the case for new proposal submissions, no KAKENHI will be delivered to a researcher who fails to submit the Report on the Research Achievements at the end of the research period, without any justifiable reason. In such cases, a cancellation of the official grant decision and an order for refund of the grant may be issued. In addition, the information such as the name of the research institute of the said researcher may be made public.

Furthermore, if a researcher fails to submit the scheduled Report on the Research Achievements without any justifiable reason, then he/she may be ordered to suspend the spending of his/her other KAKENHI grant(s) for the same fiscal year.

## 3. Completion of Research Ethics Education Coursework, etc.

The PI should check with the administrative section of his/her institution about the rules concerning the research ethics education coursework, etc. For a continued research project upon

the formal application for a grant delivery or request for payment in every fiscal year, it shall be confirmed through the electronic application system whether the PI and Co-I(s) have taken the research ethics education coursework, etc.

In case that the PI intends to add a new Co-Investigator to the continued project in FY2021, the PI has to obtain a consent to become a Co-Investigator from the researcher via the electronic application system in advance.

In this case, the Co-Investigator-to-be has to complete the followings prior to the formal application for grant delivery and report to the PI what he/she has done. (Or, in case the grant has been already delivered, he/she has to do the followings by the time the "application for approval of change of the Co-Investigator" is submitted by the PI to JSPS).

- Either to read through and learn the teaching materials by oneself concerning the research ethics education coursework such as "For the Sound Development of Science The Attitude of a Conscientious Scientist" published by the Editorial Committee of the JSPS named "For the Sound Development of Science, the "e-Learning Course on Research Ethics [eL CoRE] or "APRIN e-learning program (eAPRIN)", etc., or to attend a lecture on research ethics conducted by research institutes based on "Guidelines for Responding to Misconduct in Research (adopted by the MEXT on August 26, 2014)
- To understand thoroughly and to exercise the proper research practices in conducting their research, from amongst the contents of both the statement "Code of Conduct for Scientists -Revised Version-" by the Science Council of Japan and the booklet "For the Sound Development of Science -The Attitude of a Conscientious Scientist-" issued by the JSPS

## Attached Table 2

# Grants-in-Aid for Scientific Research-KAKENHI"Review Section Table"

○About the Review Section Table ・・・・・・・・・・・	39
○The Review Section Table (Overview) ・・・・・・・・・	40
○The Review Section Table (Table for Basic Section) • • • •	(Omitted)
○The Review Section Table	
(Table for Medium-sized and Broad Sections)	48

## December 22, 2016

Subdivision on Research Grant Screening Section of the Academic Deliberation in the Subdivision on Science, Council for Science and Technology

#### About the Review Section Table

- The Review Section Table is classified by sections for the KAKENHI's review criteria. Applicants should select a review section that is most suitable for their own research proposal.
- ○There are three review sections: Basic, Medium-sized and Broad. The Review Section Table contains 1) Overview, 2) Table for Basic Section, 3) Table for Medium-sized and Broad Sections. Looking at the Overview, the applicants can understand an overall picture of sections. In addition, check the each Review Section Table for the detailed contents of each section and select a review section for their research proposal.
- The Basic Section is the fundamental unit. The Basic Section applies to "Grant-in-Aid for Scientific Research (B/C) (application section "General")" and for "Grant-in-Aid for Early-Career Scientists". Each item of Basic Section offers some examples related research contents. They help applicants understand the concrete contents. However, it does not exclude proposal of contents other than if applicants' contents are not included the examples.
- ○The Medium-sized Section applies to "Grant-in-Aid for Scientific Research (A) (application section "General")" and "Grant-in-Aid for Challenging Research (Pioneering/Exploratory)". Several Basic Sections are attached to indicate the scope of review for the Middle-sized Section. However, it does not exclude proposal of contents other than the Basic Sections included in the Middle-sized Section. In addition, some items of Basic Sections belong to multiple Middle-sized Sections, so applicants can select a Middle-sized Section that seems to be most suitable for their own research proposal.
- ○The Broad Section applies to "Grant-in-Aid for Scientific Research (S)".

  Several Medium-sized Sections are attached to indicate the scope of review of the Broad Section. However, it does not exclude proposal of contents other than the Medium-sized Sections included in the Broad Section. Some items of Medium-sized Sections belong to several Broad Sections, so applicants can select a Broad Section that seems to be most suitable for their own research proposal.
- To respond flexibly to research diversity in the review process, application in the Basic, Medium-sized and Broad Sections is made in the following formats: Basic Section: "○○ -related"; Medium-sized Section: "○○ and related fields," and Broad Section: listed alphabetically.

## The Review Section Table (Overview)

Medium-size	d Section 1: Philosophy, art, and related fields
	Basic Section
01010	Philosophy and ethics-related
01020	Chinese philosophy, Indian philosophy and
01020	Buddhist philosophy-related
01030	Religious studies-related
01040	History of thought-related
01050	Aesthetics and art studies-related
01060	History of arts-related
01070	Theory of art practice-related
01080	Sociology of science, history of science and
01000	technology-related
90010	Design-related
Medium-size	d Section 2:Literature, linguistics, and related fields
	Basic Section
02010	Japanese literature-related
02020	Chinese literature-related
02030	English literature and literature in the English
02030	language-related
02040	European literature-related
02050	Literature in general-related
02060	Linguistics-related
02070	Japanese linguistics-related
02080	English linguistics-related
02090	Japanese language education-related
02100	Foreign language education-related
90020	Library and information science, humanistic
	and social informatics-related
Medium-size	d Section 3: History, archaeology, museology,
and rela	nted fields
	Basic Section
03010	
03020	Japanese history-related
03030	<u> </u>
03040	7 1
03050	<i>C3</i>
03060	·
03070	e,
	d Section 4: Geography, cultural anthropology,
folklore	e, and related fields
	Basic Section
04010	
04020	8 8 1 7
04030	1 67
80010	Area studies-related
80020	Tourism studies-related
80030	Gender studies-related

		ontinued)
Med	ium-sized	Section 5: Law and related fields
		Basic Section
	05010	Legal theory and history-related
	05020	Public law-related
	05030	International law-related
	05040	Social law-related
	05050	Criminal law-related
	05060	Civil law-related
	05070	New fields of law-related
Med	ium-sized	Section 6: Political science and related fields
		Basic Section
	06010	Politics-related
	06020	International relations-related
	80010	Area studies-related
	80030	Gender studies-related
Med	ium-sized	Section 7: Economics, business administration,
	and relat	ed fields
		Basic Section
	07010	Economic theory-related
	07020	Economic doctrines and economic thought-related
	07030	Economic statistics-related
	07040	Economic policy-related
	07050	Public economics and labor economics-related
	07060	Money and finance-related
	07070	Economic history-related
	07080	Business administration-related
	07090	Commerce-related
	07100	Accounting-related
	80020	Tourism studies-related
Med	ium-sized	Section 8 : Sociology and related fields
		Basic Section
	08010	Sociology-related
	08020	Social welfare-related
	08030	Family and consumer sciences, and culture and living-related
		1
	80020	Tourism studies-related

road Section	ad Section A (continued)		
Mediu	Medium-sized Section 9: Education and related fields		
		Basic Section	
	09010	Education-related	
	09020	Sociology of education-related	
	09030	Childhood and nursery/pre-school education-related	
	09040	Education on school subjects and primary/	
	09040	secondary education-related	
	09050	Tertiary education-related	
	09060	Special needs education-related	
	09070	Educational technology-related	
	09080	Science education-related	
	02090	Japanese language education-related	
	02100	Foreign language education-related	
Mediu	m-sized	Section 10 :Psychology and related fields	
		Basic Section	
	10010	Social psychology-related	
	10020	Educational psychology-related	
	10030	Clinical psychology-related	
	10040	Experimental psychology-related	
	90030	Cognitive science-related	

Medium-size	d Section 11: Algebra, geometry, and related fields
	Basic Section
11010	Algebra-related
11020	Geometry-related
Medium-size	d Section 12: Analysis, applied mathematics, and related field
	Basic Section
12010	Basic analysis-related
12020	Mathematical analysis-related
12030	Basic mathematics-related
12040	Applied mathematics and statistics-related
Medium-size	d Section 13: Condensed matter physics and related fields
	Basic Section
12010	Mathematical physics and fundamental theory of
13010	condensed matter physics-related
12020	Semiconductors, optical properties of condensed
13020	matter and atomic physics-related
12020	Magnetism, superconductivity and strongly
13030	correlated systems-related
13040	Biophysics, chemical physics and soft matter physics-relate
Medium-size	d Section 14: Plasma science and related fields
	Basic Section
14010	Fundamental plasma-related
14020	Nuclear fusion-related
14030	Applied plasma science-related
80040	Quantum beam science-related
Medium-size	d Section 15: Particle-, nuclear-, astro-physics, and related fie
	Basic Section
80040	Quantum beam science-related
	Theoretical studies related to particle-, nuclear-,
15010	cosmic ray and astro-physics
	Experimental studies related to particle-, nuclear-,
15020	cosmic ray and astro-physics
Medium-size	d Section 16: Astronomy and related fields
	Basic Section
16010	Astronomy-related
Medium-size	d Section 17: Earth and planetary science and related fields
	Basic Section
17010	1
17020	
17030	
17040	- C
17050	

nd Section C		Broad S	Section 1	D	
	1 Section 18: Mechanics of materials,	_			Section 26: Materials engineering and related fields
	ion engineering, design engineering, and related fields			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Basic Section
Basic Section			260	010	Metallic material properties-related
18010			020	Inorganic materials and properties-related	
18020	Mechanics of materials and materials-related  Manufacturing and production engineering-related			030	Composite materials and interfaces-related
18030	Design engineering-related			040	Structural materials and functional materials-related
18040	2,3			050	Material processing and microstructure control-related
	Section 19: Fluid engineering,			060	Metals production and resources production-related
thermal	engineering, and related fields	M	ledium-s	sized	Section 27: Chemical engineering and related fields
10010	Basic Section				Basic Section
19010	ů ů				Transport phenomena and unit operations-related
19020	8 8			020	Chemical reaction and process system engineering-related
Medium-sized	Section 20: Mechanical dynamics, robotics, and related fields				Catalyst and resource chemical process-related
	Basic Section				Biofunction and bioprocess engineering-related
20010		M	Iedium-s	sized	Section 28: Nano/micro science and related fields
20020	,				Basic Section
Medium-sized	1 Section 21: Electrical and electronic engineering		280	010	Nanometer-scale chemistry-related
and rela	ted fields		280	020	Nanostructural physics-related
	Basic Section		280	030	Nanomaterials-related
21010	Power engineering-related		280	040	Nanobioscience-related
21020	Communication and network engineering-related		280	050	Nano/micro-systems-related
21030	Measurement engineering-related	M	Iedium-s	sized	Section 29: Applied condensed matter physics and related f
21040	Control and system engineering-related				Basic Section
21050	Electric and electronic materials-related		290	010	Applied physical properties-related
21060	Electron device and electronic equipment-related		290	020	Thin film/surface and interfacial physical properties-relat
Medium-sized	1 Section 22: Civil engineering and related fields		290	030	Applied condensed matter physics-related
	Basic Section	M	ledium-s	sized	Section 30: Applied physics and engineering and related f
22010	Civil engineering material, execution and				Basic Section
22010	construction management-related		300	010	Crystal engineering-related
22020	Structure engineering and earthquake engineering-related		300	020	Optical engineering and photon science-related
22030	Geotechnical engineering-related	M	Iedium-s	sized	Section 31: Nuclear engineering, earth resources engineer
22040			ener	gy en	ngineering, and related fields
	Civil engineering plan and transportation				Basic Section
22050	engineering-related		310	010	Nuclear engineering-related
22060					Earth resource engineering, Energy sciences-related
	1 Section 23 : Architecture, building engineering,	M			Section 90: Biomedical engineering and related fields
	ted fields				Basic Section
	Basic Section		90	110	Biomedical engineering-related
23010			-	120	Biomaterials-related
23020	Architectural environment and building equipment-related			130	Medical systems-related
23030	Architectural planning and city planning-related			140	Medical technology assessment-related
23040					Medical assistive technology-related
90010	, ,		90.	150	and a solution to the control of the
I	d Section 24: Aerospace engineering,				
	and maritime engineering, and related fields				
marme a	Basic Section				
24010					
24010	1 0 0				
24020					
	Section 25: Social systems engineering,				
safety er	ngineering, disaster prevention engineering, and related fields				
	Basic Section				

25010

25020

25030

Social systems engineering-related

Disaster prevention engineering-related

Safety engineering-related

d Section E			
Medium-sized	Section 32: Physical chemistry,		
function	functional solid state chemistry, and related fields		
	Basic Section		
32010	Fundamental physical chemistry-related		
32020	Functional solid state chemistry-related		
Medium-sized	Section 33: Organic chemistry and related fields		
	Basic Section		
22010	Structural organic chemistry		
33010	and physical organic chemistry-related		
33020	Synthetic organic chemistry-related		
Medium-sized	Section 34: Inorganic/coordination chemistry,		
analytica	l chemistry, and related fields		
	Basic Section		
34010	Inorganic/coordination chemistry-related		
34020	Analytical chemistry-related		
24020	Green sustainable chemistry		
34030	and environmental chemistry-related		
Medium-sized	Section 35: Polymers, organic materials, and related fields		
	Basic Section		
35010	Polymer chemistry-related		
35020	Polymer materials-related		
35030	Organic functional materials-related		
Medium-sized	Section 36: Inorganic materials chemistry,		
energy-r	related chemistry, and related fields		
	Basic Section		
26010	Inorganic compounds and inorganic materials		
36010	chemistry-related		
36020	Energy-related chemistry		
Medium-sized	Section 37: Biomolecular chemistry and related fields		
	Basic Section		
37010	Bio-related chemistry		
27020	Chemistry and chemical methodology of		
37020	biomolecules-related		
37030	Chemical biology-related		

d Section F				
	l Section 38 : Agricultural chemistry and related fields			
Basic Section				
38010	Plant nutrition and soil science-related			
38020	Applied microbiology-related			
38020				
38040				
38050	Bioorganic chemistry-related Food sciences-related			
38060	Applied molecular and cellular biology-related			
	Applied molecular and centular biology-related  I Section 39: Agricultural and environmental biology			
	ted fields			
and rela	Basic Section			
39010				
	Science in plant genetics and breeding-related			
39020	Crop production science-related			
39030	Horticultural science-related			
39040	1			
39050	Insect science-related			
39060	Conservation of biological resources-related			
39070	1			
	Section 40: Forestry and forest products science,			
applied	aquatic science, and related fields			
	Basic Section			
40010	Forest science-related			
40020				
40030	Aquatic bioproduction science-related			
40040	Aquatic life science-related			
Medium-sized	Section 41: Agricultural economics and rural sociology,			
agricultu	aral engineering, and related fields			
	Basic Section			
41010	Agricultural and food economics-related			
41020	Rural sociology and agricultural structure-related			
41030	Rural environmental engineering and planning-related			
41040	Agricultural environmental engineering and			
41040	agricultural information engineering-related			
41050	Environmental agriculture-related			
Medium-sized	Section 42: Veterinary medical science, animal science,			
and related fields				
	Basic Section			
42010	Animal production science-related			
42020	Veterinary medical science-related			
42030	Animal life science-related			

Medium-sized Section 43: Biology at molecular to cellular levels,		
and relate	ed fields	
	Basic Section	
43010	Molecular biology-related	
43020	Structural biochemistry-related	
43030	Functional biochemistry-related	
43040	Biophysics-related	
43050	Genome biology-related	
43060	System genome science-related	
Medium-sized	Section 44: Biology at cellular to organismal levels,	
and relate	ed fields	
	Basic Section	
44010	Cell biology-related	
44020	Developmental biology-related	
44030	Plant molecular biology and physiology-related	
44040	Morphology and anatomical structure-related	
44050	Animal physiological chemistry, physiology and	
44050	behavioral biology-related	
Medium-sized	Section 45: Biology at organismal to population levels	
and anth	ropology, and related fields	
	Basic Section	
45010	Genetics-related	
45020	Evolutionary biology-related	
45030	Biodiversity and systematics-related	
45040	Ecology and environment-related	
45050	Physical anthropology-related	
45060	Applied anthropology-related	
Medium-sized	Section 46: Neuroscience and related fields	
	Basic Section	
46010	Neuroscience-general-related	
46020	Anatomy and histopathology of nervous system-related	
46030	Function of nervous system-related	

ad Sec	tion H		
Med	Medium-sized Section 47: Pharmaceutical sciences and related fields		
	Basic Section		
	47010	Pharmaceutical chemistry and drug development sciences-relate	
	47020	Pharmaceutical analytical chemistry and physicochemistry-related	
	47030	Pharmaceutical hygiene and biochemistry-related	
	47040	Pharmacology-related	
	47050	Environmental and natural pharmaceutical resources-related	
	47060	Clinical pharmacy-related	
Med	ium-sized	Section 48: Biomedical structure and function and related field	
		Basic Section	
	48010	Anatomy-related	
	48020	Physiology-related	
	48030	Pharmacology-related	
	48040	Medical biochemistry-related	
Med	ium-sized	Section 49: Pathology, infection/immunology, and related field	
		Basic Section	
	49010 Pathological biochemistry-related		
	49020	Human pathology-related	
	49030	Experimental pathology-related	
	49040	Parasitology-related	
	49050	Bacteriology-related	
	49060	Virology-related	
	49070	Immunology-related	

d Section	on I	
Mediu	m-sized	Section 50: Oncology and related fields
		Basic Section
	50010	Tumor biology-related
	50020	Tumor diagnostics and therapeutics-related
Mediu	m-sized	Section 51: Brain sciences and related fields
		Basic Section
	51010	Basic brain sciences-related
	51020	Cognitive and brain science-related
	51030	Pathophysiologic neuroscience-related
Mediu	m-sized	Section 52: General internal medicine and related fields
		Basic Section
	52010	General internal medicine-related
	52020	Neurology-related
	52030	Psychiatry-related
	52040	Radiological sciences-related
	52050	Embryonic medicine and pediatrics-related
Mediu	m-sized	Section 53: Organ-based internal medicine and related field
		Basic Section
	53010	Gastroenterology-related
	53020	Cardiology-related
	53030	Respiratory medicine-related
	53040	Nephrology-related
	53050	Dermatology-related
		Section 54: Internal medicine of the bio-information on and related fields
L		Basic Section
L	54010	Hematology and medical oncology-related
	54020	Connective tissue disease and allergy-related
-	54030	Infectious disease medicine-related
	54040	Metabolism and endocrinology-related
		Section 55: Surgery of the organs maintaining
h	omeosta	sis and related fields
		Basic Section
	55010	General surgery and pediatric surgery-related
L	55020	Digestive surgery-related
	55030	Cardiovascular surgery-related
L	55040	Respiratory surgery-related
L	55050	Anesthesiology-related
	55060	Emergency medicine-related
		Section 56: Surgery related to the biological and
S	ensory f	unctions and related fields
L		Basic Section
L	56010	Neurosurgery-related
L	56020	Orthopedics-related
L	56030	Urology-related
	56040	Obstetrics and gynecology-related
	56050	Otorhinolaryngology-related
	56060	Ophthalmology-related
L		

d Sec	1 Section I (continued)				
	Medium-sized Section 57: Oral science and related fields				
	Basic Section				
	57010 Oral biological science-related				
	57020 Oral pathobiological science-related				
	57030	Conservative dentistry-related			
	57040	Regenerative dentistry and dental engineering-related			
	57050	Prosthodontics-related			
	57060				
	57070	Surgical dentistry-related			
		Developmental dentistry-related			
Madi	57080	Social dentistry-related			
Med	Medium-sized Section 58: Society medicine, nursing, and related fields				
	<b>50010</b>	Basic Section			
		Medical management and medical sociology-related			
	58020	Hygiene and public health-related: including laboratory approach			
	58030	Hygiene and public health-related: excluding laboratory approach			
	58040	Forensics medicine-related			
	58050	Fundamental of nursing-related			
	58060	Clinical nursing-related			
	58070	Lifelong developmental nursing-related			
	58080	Gerontological nursing and community health nursing-related			
Medi	ium-sized	Section 59: Sports sciences, physical education,			
	health sci	ences, and related fields			
		Basic Section			
	59010	Rehabilitation science-related			
	59020	Sports sciences-related			
	59030	Physical education, and physical and health education-related			
	59040	Nutrition science and health science-related			
Medi	ium-sized	Section 90: Biomedical engineering and related fields			
	Basic Section				
	90110	Biomedical engineering-related			
	90120	Biomaterials-related			
	90130	Medical systems-related			
	90140	Medical technology assessment-related			
	90150	Medical assistive technology-related			
	70130	1710aicai assistive teciniology-related			

mond Section J  Medium-sized Section 60: Information science, computer engineering, and related fields  Basic Section		
and related fields  Basic Section		
Basic Section		
60010 Theory of informatics-related		
60020 Mathematical informatics-related		
60030 Statistical science-related		
60040 Computer system-related		
60050 Software-related		
60060 Information network-related		
60070 Information security-related		
60080 Database-related		
60090 High performance computing-related		
60100 Computational science-related		
Medium-sized Section 61: Human informatics and related fields		
Basic Section		
61010 Perceptual information processing-related		
61020 Human interface and interaction-related		
61030 Intelligent informatics-related		
61040 Soft computing-related		
61050 Intelligent robotics-related		
61060 Kansei informatics-related		
90010 Design-related		
90030 Cognitive science-related		
Medium-sized Section 62: Applied informatics and related fields		
Basic Section		
62010 Life, health and medical informatics-related		
62020 Web informatics and service informatics-related		
62030 Learning support system-related		
62040 Entertainment and game informatics-related		
Library and information science,		
90020 humanistic and social informatics-related		

Broad Sect	oad Section K		
Medi	um-sized	Section 63: Environmental analyses and evaluation	
;	and relate	ed fields	
		Basic Section	
	63010	Environmental dynamic analysis-related	
	63020	Radiation influence-related	
	63030	Chemical substance influence on environment-related	
	63040	Environmental impact assessment-related	
Medi	Medium-sized Section 64: Environmental conservation measure		
	and relate	ed fields	
		Basic Section	
	64010	Environmental load and risk assessment-related	
	64020	Environmental load reduction and remediation-related	
	64030	Environmental materials and recycle technology-related	
	64040	Social-ecological systems-related	
	64050	Sound material-cycle social systems-related	
	64060	Environmental policy and social systems-related	

## The Review Section Table (Table for Medium-sized and Broad Sections)

When selecting a review section, applicants should first acquire an overall picture of the review sections based on the Review Section Table (Overview). In addition, check the Review Section Table (Table for Medium-sized and Broad Sections) for the detailed contents of each section and select a review section for their research proposal.

Also, some items of Basic Section may be presented in plural Medium-sized and Broad Sections. The items of Basic Section presented in plural Medium-sized Section are 9 and 3 items among 9 are presented in plural Medium-sized and Broad Sections (as shown below).

In addition, five other Basic Sections (90110-90150) may be presented in only one Medium-sized Section and two Broad Sections.

## [Basic sections may be presented in plural Medium-sized and Broad Section]

Basic Section Item	Basic Section Description	Medium-sized Sections corresponding Basic Sections	Broad Sections corresponding Basic Sections
02090	Japanese language education-related	2, 9	A
02100	Foreign language education-related	2, 9	A
80010	Area studies-related	4, 6	A
80020	Tourism studies-related	4, 7, 8	A
80030	Gender studies-related	4, 6, 8	A
80040	Quantum beam science-related	14, 15	В
90010	Design-related	1, 23, 61	А, С, Ј
90020	Library and information science, humanistic and social informatics-related	2, 62	A, J
90030	Cognitive science-related	10,61	A, J
90110	Biomedical engineering-related	9 0	D, I
90120	Biomaterials-related	9 0	D, I
90130	Medical systems-related	9 0	D, I
90140	Medical technology assessment-related	9 0	D, I
90150	Medical assistive technology-related	9 0	D, I

## [Medium-sized section may be presented in plural Broad Section]

Medium-sized Section Item	Medium-sized section Description	Broad Sections corresponding Medium-sized Section
9 0	Biomedical engineering and related fields	D, I

## Broad Section A

Medium-sized Section 1: Philosophy, art, and related fields

O1010 Philosop Applied  Chinese O1020 Chinese  Religiou O1030 History Anthrop History History History History	phy and ethics-related phy in general, Ethics in general, Western philosophy, Western ethics, Japanese philosophy, Japanese ethics, lethics, etc.  philosophy, Indian philosophy and Buddhist philosophy-related philosophy/thought, Indian philosophy/thought, Buddhist philosophy, Bibliography, Philology, etc.
Applied  Chinese  01020  Chinese  Religiou  History Anthrop  History History History History	ethics, etc.  philosophy, Indian philosophy and Buddhist philosophy-related
01020 Chinese  Religiou  01030 History Anthrop  History History History	
01020 Chinese  Religiou  01030 History Anthrop  History History History	
01030 History Anthrop History 01040 History History	1 1 1 5 7 F 1-1-F 30 1-10 9 mm 1-1-F 37 1 10 mF 37 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Anthrop  History  01040 History  History	us studies-related
01040 History	of religions, Philosophy of religion, Theology, Sociology of religion, Psychology of religion, bology of religions, Studies of religious folklore, Mythology, Bibliography, Philology, etc.
History	of thought-related
Aestheti	of thought in general, History of Western thought, History of Eastern thought, of Japanese thought, etc.
7 105111011	ics and art studies-related
01050 Philosop	phy of art, Aesthetics, Miscellaneous art studies, etc.
History	of arts-related
	e art, Eastern art, Western art, Contemporary art, Craft, Design, Architecture, e, Photography, etc.
Theory	of art practice-related
01070 Art expr	ression, Arts management, Art policy, Art production, etc.
Sociolog	gy of science, history of science and technology-related
	gy of science, History of science, History of technology, History of medicine, Industrial archeology, phy of science, Foundation of science, STS (Science, technology and society), etc.
Design-	related
90010 Informati Design s	tion design, Environmental design, Industrial design, Spatial design, Design history, Theory of design,

## Medium-sized Section 2: Literature, linguistics, and related fields

Basic Section	Examples of related research content
	Japanese literature-related
02010	Japanese literature in general, Ancient literature, Medieval literature, Chinese classics in Japan, Bibliography, Philology, Premodern literature, Modern literature, Contemporary literature, Literary theory, etc.
	Chinese literature-related
02020	Chinese literature, Bibliography, Philology, Literary theory, etc.
	English literature and literature in the English language-related
02030	English literature, American literature, Literature in the English language, Literary theory, Bibliography, Philology, etc.
	European literature-related
02040	French literature, Literature in the French language, German literature, Literature in the German language, Classics, Russian and East European literature, Literature in other European languages, Literary theory, Bibliography, Philology, etc.

1 1		Ten and the second second
		Literature in general-related
	02050	Literature in other languages and areas, Literary theory, Comparative literature, Bibliography, Philology, Literature education, etc.
		Linguistics-related
	02060	Phonetics/phonology, Semantics/pragmatics, Morphosyntax, Sociolinguistics, Contrastive linguistics, Psycholinguistics, Neurolinguistics, Historical linguistics, Corpus linguistics, Endangered and minority languages, etc.
		Japanese linguistics-related
	02070	Phonetics/phonology, Writing systems, Lexicon and semantics, Grammar, Stylistics, Pragmatics, Language life, Dialect, History of the Japanese language, History of Japanese linguistics, etc.
		English linguistics-related
	02080	Phonetics/phonology, Lexicon and semantics, Grammar, Stylistics, Pragmatics, Sociolinguistics, Diversity of the English language, Corpus linguistics, History of the English language, History of English linguistics, etc.
		Japanese language education-related
		Research on learners, Language acquisition, Teaching material, Curriculum evaluation,
	02090	Japanese language education for specific purposes, Bilingual education, Research on teachers,
		Japanese language for Japanese language education, History of Japanese language education, Cross-cultural understanding, etc.
		Foreign language education-related
		Learning method, Computer-assisted language learning (CALL), Teaching material, Language testing,
	02100	Theory of second language acquisition, Early English education,
		History of foreign language education and language policies, Curriculum evaluation, Training foreign language teachers, Cross-cultural understanding, etc.
		Training foreign language teachers, cross-cultural understanding, etc.
		Library and information science, humanistic and social informatics-related
	90020	Library science, Information services, Information organizing, Information retrieval, Information media, Bibliometrics, Information resources, Information ethics, Digital humanities, Social Informatics, Digital archives, etc.
Mediur	m-sized Sect	tion 3: History, archaeology, museology, and related fields
	Basic Section	Examples of related research content
		Historical studies in general-related
	03010	Historical theory, Historical methodology, Research in historical materials, Memory and medium, World history, History of cultural and diplomatic exchange, Comparative history, etc.
		Japanese history-related
		Japanese history in general, History of ancient Japan, History of medieval Japan,
	03020	History of early modern Japan, History of modern Japan, History of local Japan, History of Japanese culture,
		History of Japanese religion, History of Japanese environment, History of Japanese city,
		History of cultural and diplomatic exchange, Comparative history, Research in historical materials, etc.
		History of Asia and Africa-related
	03030	History of pre-modern China, History of modern China, East Asian history, Central Eurasian history,
	03030	Southeast Asian history, Oceanian history, South Asian history, West Asian history, African history, History of cultural and diplomatic exchange, Comparative history, Research in historical materials, etc.
		History of Europe and America-related
	03040	Ancient European history, Medieval European history, Modern and contemporary West European history,
		Modern and contemporary East European history, North and South American history, History of cultural and diplomatic exchange, Comparative history, Research in historical materials, etc.
		Archaeology-related
	02050	Archaeology in general, Prehistoric archaeology, Historical archaeology, Japanese archaeology,
	03050	Asian archaeology, Ancient civilizations, History of material culture, Experimental archaeology, Information archaeology, Study of buried cultural property, etc.

		Cultural assets study-related
	03060	Dating methods, Material analysis, Production techniques, Conservation science, Archaeological prospection, Plant and animal residues, Human remains, Cultural heritage, Cultural resources, Cultural property policy, etc.
		Museology-related
	03070	Exhibition studies, Museum pedagogy, Museum informatics, Museum business management, Public finance and administration of museums, Museum material resources, History of museology, etc.
1edium-	-sized Sect	tion 4: Geography, cultural anthropology, folklore, and related fields
	Basic Section	Examples of related research content
		Geography-related
	04010	Geography in general, Land use, Landscape, Environmental system, Geomorphology, Climatology, Hydrology, Cartography, Geographic information system, Regional planning, etc.
		Human geography-related
	04020	Human geography in general, Economic geography, Social geography, Political geography, Cultural geography, Urban geography, Rural geography, Historical geography, Regional geography, Geography education, etc.
		Cultural anthropology and folklore-related
	04030	Cultural anthropology in general, Folklore in general, Material culture, Ecology, Social relationship, Religion, Arts, Health care, Border crossing, Minority, etc.
		Area studies-related
	80010	Area studies in general, Cross-regional comparative studies, Aid, International cooperation, Interregional exchange, Environment, Transnationalism, Globalization, Social development, etc.
		Tourism studies-related
	80020	Tourism studies in general, Tourism, Tourism resources, Tourism policy, Tourism industry, Regional development, Tourists, Pilgrimage, etc.
		Gender studies-related
	80030	Gender studies in general, Feminism, Sexuality, Queer studies, Labor, Violence, Prostitution, Reproductive technology, Gender equality, etc.
edium-	-sized Sect	tion 5 : Law and related fields
	Basic Section	Examples of related research content
		Legal theory and history-related
	05010	Legal philosophy, Roman law, Legal history, Sociology of law, Comparative law, Foreign law, Law and policy, Law and economics, Judicial system, etc.
		Public law-related
	05020	Constitutional law, Administrative law, Tax law, etc.
	03020	Constitutional law, reministrative law, ran law, etc.
_	03020	International law-related
	05030	
_		International law-related Public international law, Private international law, International human rights law, International economic law,
		International law-related  Public international law, Private international law, International human rights law, International economic law, EU law, etc.
	05030	International law-related Public international law, Private international law, International human rights law, International economic law, EU law, etc.  Social law-related
	05030	International law-related Public international law, Private international law, International human rights law, International economic law, EU law, etc.  Social law-related Labor law, Economic law, Social security law, Education law, etc.
_	05030 05040	International law-related Public international law, Private international law, International human rights law, International economic law, EU law, etc.  Social law-related Labor law, Economic law, Social security law, Education law, etc.  Criminal law-related

Consumer law, Intellectual property law,  of related research content  al history, Japanese political history, Japanese politics, ny, Public administration, Local government,
of related research content al history, Japanese political history, Japanese politics,
al history, Japanese political history, Japanese politics,
al history, Japanese political history, Japanese politics,
nal relations, Diplomatic history, International history, political economy, Global governance,
studies, Aid, International cooperation, lism, Globalization, Social development, etc.
eer studies, Labor, Violence, ality, etc.
ed fields
of related research content
Behavioral economics, Experimental economics, nic institutions, Economic systems, etc.
ight, Economic philosophy, etc.
atistics, Income/wealth distribution, National accounts,
onomic development, Urban economics,
onomics, Japanese economy, Economic policy, s, International development, etc.
s, Labor economics, Social security, I economy, etc.
e, Corporate finance, Financial engineering, Insurance, etc.
ry, etc.
ional behavior, Corporate strategy, nt, Management of technology, International business, Management in general, etc.

		Commerce-related	
	07090	Marketing, Consumer behavior, Distributive sciences, Logistics, Commerce in general, etc.	
		Accounting-related	
	07100	Financial accounting, Management accounting, Auditing, Accounting in general, etc.	
	20020	Tourism studies-related Tourism studies in general, Tourism, Tourism resources, Tourism policy, Tourism industry,	
	80020	Regional development, Tourists, Pilgrimage, etc.	
Mediun	n-sized Sect	tion 8 : Sociology and related fields	
	Basic Section	Examples of related research content	
		Sociology-related Sociology-related	
	08010	Sociology in general, Community, Family, Labor, Sociology of welfare, Gender, Media, Ethnicity, Social movements, Social research, Sociology of medicine, Social demography, etc.	
		Social welfare-related	
	08020	Social work, Social policy, Social welfare history, Child welfare, Social welfare for people with disabilities, Social welfare for aging, Community welfare, Poverty, Volunteerism, Social welfare in general, etc.	
		Family and consumer sciences, and culture and living-related	
	08030	Culture and living, Home economics, Consumer affairs, Lifestyle, Culture of clothing, Culture of food,	
	00030	Culture of dwelling, Dress and fashion, Diet habits, Housing, Family and consumer sciences in general, Family and consumer education, etc.	
		Tourism studies-related	
	80020	Tourism studies in general, Tourism, Tourism resources, Tourism policy, Tourism industry, Regional development, Tourists, Pilgrimage, etc.	
		Gender studies-related	
	80030	Gender studies in general, Feminism, Sexuality, Queer studies, Labor, Violence, Prostitution, Reproductive technology, Gender equality, etc.	
Medium-sized Section 9 : Education and related fields			
	Basic Section	Examples of related research content	
		Education-related	
	09010	History of education, Philosophy of education, Curriculum and pedagogy, Evaluation of education, Teacher and trainer, School education, Social and community education, Vocational education and training, Lifelong learning, Institutions and administration, etc.	
		Sociology of education-related	
	09020	Sociology of education, Socialization, Educational organization and system, Destination and career formation, Class disparities, Gender, Education policy, Comparative education, Globalization and development, etc.	
		Childhood and nursery/pre-school education-related	
	09030	Childhood, Nursery/pre-school education, Right of child, Development, Contents and methods of child care, Childcare facilities and kindergarten, Caregiver and pre-school teacher, Child care support, Childhood culture, History and thought, etc.	
		Education on school subjects and primary/secondary education-related	
	09040	Education of individual subjects, Education excluding subjects, Student guidance and counselling, Career education, School management, Teacher education, ESD, Environmental education, Literacy, etc.	
		Tertiary education-related	
	09050	Policy, Admission and articulation, Curriculum, Career guidance, Teacher and staff, Scientific research, Regional link and contribution, Globalization, Management and governance, Non-university higher education, etc.	
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	Special needs education-related
09060	Philosophy and history, Inclusion and cohesive society, Instructions and supports, Developmental disabilities, Emotional disturbance, Intellectual disabilities, Language disorders, Physical disabilities, Career education, etc.
	Educational technology-related
09070	Curriculum development, Teaching-learning support systems, Utilization of media, Utilization of ICT, Teacher's education, Information literacy, etc.
	Science education-related
09080	Science education, Science communication, Scientific literacy, Science and society, etc.
	Japanese language education-related
	Research on learners, Language acquisition, Teaching material, Curriculum evaluation,
02090	Japanese language education for specific purposes, Bilingual education, Research on teachers,
	Japanese language for Japanese language education, History of Japanese language education, Cross-cultural understanding, etc.
	Foreign language education-related
	Learning method, Computer-assisted language learning (CALL), Teaching material, Language testing,
02100	Theory of second language acquisition, Early English education,
	History of foreign language education and language policies, Curriculum evaluation,
	Training foreign language teachers, Cross-cultural understanding, etc.

## Medium-sized Section 10 :Psychology and related fields

Basic Section	Examples of related research content
	Social psychology-related
10010	Social psychology in general, Self, Group, Attitude and behavior, Affection/emotion, Interpersonal relation, Social issues, Culture, etc.
	Educational psychology-related
10020	Educational psychology in general, Development, Family, School, Clinical practice, Personality, Learning, Assessment and evaluation, etc.
	Clinical psychology-related
10030	Clinical psychology in general, Psychological disorder, Assessment, Psychological intervention, Training, Mental health, Crime and delinquency, Community, etc.
	Experimental psychology-related
10040	Experimental psychology in general, Sensation, Perception, Attention, Memory, Language, Emotion, Learning, etc.
	Cognitive science-related
90030	Cognitive science in general, Cognitive models, Kansei, Human factors, Cognitive and brain science, Comparative cognition, Cognitive linguistics, Cognitive engineering, etc.

## Broad Section B

Medium-sized Section 11: Algebra, geometry, and related fields

Basic Section	Examples of related research content
11010	Algebra-related  Group theory, Ring theory, Representation theory, Algebraic combinatorics, Number theory, Arithmetic geometry, Algebraic geometry, Algebraic analysis, etc.
11020	Geometry-related  Differential geometry, Riemannian geometry, Symplectic geometry, Complex geometry, Topology,  Differential topology, Low dimensional topology, etc.

Ba	asic	Examples of related research content
Sec	ction	·
		Basic analysis-related
120	010	Functional analysis, Complex analysis, Probability theory, Harmonic analysis, Operator theory, Spectral analysis, Operator algebras, Algebraic analysis, Representation theory, etc.
		Mathematical analysis-related
120	020	Functional equations, Real analysis, Dynamical system, Variational method, Nonlinear analysis, Applied analysis, etc.
		Basic mathematics-related
120	030	Mathematical logic and foundations, Information theory, Discrete mathematics, Computer mathematics, etc.
		Applied mathematics and statistics-related
120	040	Numerical analysis, Mathematical modelling, Optimal control, Game theory, Statistical mathematics, etc.
dium-size	d Sect	ion 13: Condensed matter physics and related fields
-	asic ction	Examples of related research content
		Mathematical physics and fundamental theory of condensed matter physics-related
130	010	Statistical physics, Fundamental theory of condensed matter physics, Mathematical physics, Nonequilibrium nonlinear physics, Fluid dynamics, Computational physics, Quantum information theory, etc.
		Semiconductors, optical properties of condensed matter and atomic physics-related
130	020	Semiconductors, Dielectrics, Atoms and molecules, Mesoscopic systems, Crystals, Surfaces and interfaces, Optical properties of condensed matter, Quantum electronics, Quantum information, etc.
		Magnetism, superconductivity and strongly correlated systems-related
130	030	Magnetism, Strongly correlated electron systems, Superconductivity, Quantum fluids and solids, Molecular solids, etc.
		Biophysics, chemical physics and soft matter physics-related
130	040	Physics of biological phenomena, Physics of biological matters, Liquids and glasses, Soft matters, Rheology, etc.
dium-size	d Sect	ion 14: Plasma science and related fields
	asic ction	Examples of related research content
	_	Fundamental plasma-related
140	010	Basic plasmas, Magnetized plasmas, Laser plasmas, Strongly coupled plasmas, Plasma diagnostics, Astrophysical and space plasmas, etc.
		Nuclear fusion-related
140	020	Plasma confinement, Plasma control, Plasma heating, Plasma diagnostics, Edge plasma, Plasma wall interaction, Inertial fusion, Fusion material, Fusion system, etc.
		Applied plasma science-related
140	030	Plasma processing, Plasma photonics, Plasma material science, General plasma applications, etc.
		Quantum beam science-related
		Accelerators, Beam physics, Radiation detectors, Beam control, Applied quantum beam science, etc.

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	Basic Section	Examples of related research content
		Quantum beam science-related
	80040	Accelerators, Beam physics, Radiation detectors, Beam control, Applied quantum beam science, etc.
		Theoretical studies related to particle-, nuclear-, cosmic ray and astro-physics
	15010	Particle physics, Nuclear physics, Cosmic-ray physics, Astrophysics, Relativity, Gravity, etc.
		Experimental studies related to particle-, nuclear-, cosmic ray and astro-physics
	15020	Particle physics, Nuclear physics, Cosmic-ray physics, Astrophysics, Relativity, Gravity, etc.
/ledium-si	ized Sect	ion 16: Astronomy and related fields
	Basic Section	Examples of related research content
		Astronomy-related
	16010	Optical/infrared astronomy, Radio astronomy, Solar physics, Astrometry, Theoretical astronomy, X-ray/ $\gamma$ -ray astronomy, etc.
/ledium-si	ized Sect	ion 17: Earth and planetary science and related fields
	Basic Section	Examples of related research content
		Space and planetary sciences-related
	17010	Solar-terrestrial physics, Aeronomy, Planetary science, Exoplanetary science, Extraterrestrial material science, etc.
		Atmospheric and hydrospheric sciences-related
	17020	Climate system, Atmospheric science, Ocean science, Limnology, Glaciology, Paleoclimatology, etc.
		Human geosciences-related
	17030	Geoenvironmental science, Natural disaster science, Geospatial information science, Quaternary research, Earth resources science, etc.
		Solid earth sciences-related
	17040	Solid earth geophysics, Geology, Earth's interior material science, Solid earth geochemistry, etc.
		Biogeosciences-related
	17050	Origin and evolution of life, Extremophile biology, Biogeochemistry, Paleoenvironmental science, Paleontology, etc.
ection C		
/ledium-si	ized Sect	ion 18: Mechanics of materials, production engineering, design engineering, and related fields
	Basic Section	Examples of related research content
		Mechanics of materials and materials-related
	18010	Structural mechanics, Fatigue, Fracture, Biomaterials, Material design, Material characteristics, Material evaluation, etc.

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Machine tools, Machining, Non-traditional machining, Ultraprecision machining, Additive manufacturing, Precision metrology, Manufacturing systems, Computer-aided technology, Process planning, etc.

Manufacturing and production engineering-related

18020

	Design engineering-related
10020	Product design, Service design, Design for reliability, Maintainability design, Lifecycle engineering,
18030	Reverse engineering, Safety design, Design engineering, etc.
	Machine elements and tribology-related
18040	Machine elements, Mechanisms, Tribology, Actuators, Micromachines, etc.
Medium-sized Sec	tion 19: Fluid engineering, thermal engineering, and related fields
Basic Section	Examples of related research content
	Fluid engineering-related
19010	Fluid machinery, Flow measurement, Computational fluid dynamics, Turbulence, Multiphase flow, Compressible flow, Incompressible flow, etc.
	Thermal engineering-related
19020	Heat transfer, Convection, Combustion, Thermophysical properties, Refrigeration and air-conditioning, Heat engine, Energy conversion, etc.
fedium-sized Sec	tion 20: Mechanical dynamics, robotics, and related fields
Basic Section	Examples of related research content
	Mechanics and mechatronics-related
20010	Kinematics, Kinetics, Vibration, Acoustics, Automation, Learning control, Mechatronics, Micro/nano mechatronics, Biomechanics, etc.
	Robotics and intelligent system-related
20020	Robotics, Intelligent system, Human mechanical system, Human interface, Planning, Intelligent spatial system, Virtual reality, Augmented reality, etc.
Medium-sized Sec	tion 21: Electrical and electronic engineering and related fields
Basic Section	Examples of related research content
	Power engineering-related
21010	Electrical energy-related, Energy conservation, Power system engineering, Electric machinery, Power electronics, Effective utilization of electric energy, Electromagnetic compatibility, etc.
	Communication and network engineering-related
21020	Information theory, Nonlinear theory, Signal processing, Wired/wireless communication systems,
21020	Modulation/demodulation, Antennas, Networks, Multimedia, Cryptography/security, etc.
	Measurement engineering-related
21030	Measurement theory, Measuring instruments, Applied wave metrology, Measurement systems, Signal processing, Sensing devices, etc.
	Control and system engineering-related
21040	Control theory, System theory, Control systems, Knowledge-based control systems, System information processing, System control applications, Biosystems engineering, etc.
	Electric and electronic materials-related
21050	Semiconductor, Dielectric materials, Magnetic materials, Organic materials, Superconductor, Composite materials, Thin films, Quantum structures, Thick films, Fabrication/characterization methods, etc.
	Electron device and electronic equipment-related
21060	Electron devices, Circuit design, Optical devices, Spintronic devices, Millimeter wave/terahertz wave, Applied wave devices, Storage devices, Displays, Micro fabrication process technology,
	Implementation technology, etc.

Section	Examples of related research content
	Civil engineering material, execution and construction management-related
22010	Concrete, Steel, Composite material, Wood, Pavement material, Repair and reinforce material, Execution, Maintenance, Construction management, Underground space, etc.
	Structure engineering and earthquake engineering-related
22020	Applied mechanics, Structure engineering, Steel structure, Concrete structure, Composite structure, Wind engineering, Earthquake engineering, Aseismatic structure, Earthquake prevention, etc.
	Geotechnical engineering-related
22030	Soil mechanics, Foundation engineering, Rock engineering, Engineering Geology, Ground behavior, Soil structure, Geo-disaster prevention, Geoenvironmental engineering, Tunnel engineering, Soil environment, etc.
	Hydroengineering-related
22040	Hydraulics, Environmental hydraulics, Hydrology, River engineering, Water resource engineering, Coastal engineering, Port and harbor engineering, Ocean engineering, etc.
	Civil engineering plan and transportation engineering-related
22050	Civil engineering plan, Regional urban planning, Spatial planning, Disaster prevention plan, Transportation plan, Transportation engineering, Railway engineering, Surveying and remote sensing, Landscape design, Civil engineering history, etc.
	Environmental systems for civil engineering-related
22060	Environment plan, Environmental system, Environment conservation, Water serve and drainage systems, Waste, Water environment, Atmospheric circulation, Noise and vibration, Environment ecology, Environmental monitoring, etc.
-sized Sec	tion 23: Architecture, building engineering, and related fields
Basic Section	Examples of related research content
	Building structures and materials-related
23010	Load theory, Structural analysis, Structural design, Structures, Earthquake resistant design,
	Foundation, Geotechnics, Structural material, Maintenance, Building construction method, etc.
	Foundation, Geotechnics, Structural material, Maintenance, Building construction method, etc.
23020	
23020	Foundation, Geotechnics, Structural material, Maintenance, Building construction method, etc.  Architectural environment and building equipment-related  Sound environment, Vibration environment, Light environment, Heat environment, Air environment, Environmental psychology/physiology, Building equipment, Fire engineering, Urban environment,
23020	Foundation, Geotechnics, Structural material, Maintenance, Building construction method, etc.  Architectural environment and building equipment-related  Sound environment, Vibration environment, Light environment, Heat environment, Air environment, Environmental psychology/physiology, Building equipment, Fire engineering, Urban environment, Environment design, etc.
23030	Foundation, Geotechnics, Structural material, Maintenance, Building construction method, etc.  Architectural environment and building equipment-related  Sound environment, Vibration environment, Light environment, Heat environment, Air environment, Environmental psychology/physiology, Building equipment, Fire engineering, Urban environment, Environment design, etc.  Architectural planning and city planning-related  Planning theory, Design theory, Housing theory, Buildings, Urban/regional planning, Administration, Building economics, Production management, Disaster prevention planning, Landscape, etc.  Architectural history and design-related
	Foundation, Geotechnics, Structural material, Maintenance, Building construction method, etc.  Architectural environment and building equipment-related  Sound environment, Vibration environment, Light environment, Heat environment, Air environment, Environmental psychology/physiology, Building equipment, Fire engineering, Urban environment, Environment design, etc.  Architectural planning and city planning-related  Planning theory, Design theory, Housing theory, Buildings, Urban/regional planning, Administration, Building economics, Production management, Disaster prevention planning, Landscape, etc.  Architectural history and design-related
23030	Foundation, Geotechnics, Structural material, Maintenance, Building construction method, etc.  Architectural environment and building equipment-related  Sound environment, Vibration environment, Light environment, Heat environment, Air environment, Environmental psychology/physiology, Building equipment, Fire engineering, Urban environment, Environment design, etc.  Architectural planning and city planning-related  Planning theory, Design theory, Housing theory, Buildings, Urban/regional planning, Administration, Building economics, Production management, Disaster prevention planning, Landscape, etc.  Architectural history and design-related
23030	Foundation, Geotechnics, Structural material, Maintenance, Building construction method, etc.  Architectural environment and building equipment-related  Sound environment, Vibration environment, Light environment, Heat environment, Air environment, Environmental psychology/physiology, Building equipment, Fire engineering, Urban environment, Environment design, etc.  Architectural planning and city planning-related  Planning theory, Design theory, Housing theory, Buildings, Urban/regional planning, Administration, Building economics, Production management, Disaster prevention planning, Landscape, etc.  Architectural history and design-related  Architectural history, Urban history, Architectural theory, Design, Landscape, Preservation, Renovation, etc.
23030 23040 90010	Foundation, Geotechnics, Structural material, Maintenance, Building construction method, etc.  Architectural environment and building equipment-related  Sound environment, Vibration environment, Light environment, Heat environment, Air environment, Environmental psychology/physiology, Building equipment, Fire engineering, Urban environment, Environment design, etc.  Architectural planning and city planning-related  Planning theory, Design theory, Housing theory, Buildings, Urban/regional planning, Administration, Building economics, Production management, Disaster prevention planning, Landscape, etc.  Architectural history and design-related  Architectural history, Urban history, Architectural theory, Design, Landscape, Preservation, Renovation, etc.  Design-related  Information design, Environmental design, Industrial design, Spatial design, Design history,
23030 23040 90010 1-sized Sec Basic	Foundation, Geotechnics, Structural material, Maintenance, Building construction method, etc.  Architectural environment and building equipment-related  Sound environment, Vibration environment, Light environment, Heat environment, Air environment, Environmental psychology/physiology, Building equipment, Fire engineering, Urban environment, Environment design, etc.  Architectural planning and city planning-related  Planning theory, Design theory, Housing theory, Buildings, Urban/regional planning, Administration, Building economics, Production management, Disaster prevention planning, Landscape, etc.  Architectural history and design-related  Architectural history, Urban history, Architectural theory, Design, Landscape, Preservation, Renovation, etc.  Design-related  Information design, Environmental design, Industrial design, Spatial design, Design history, Theory of design, Design standard, Design support, Evaluation of design, Design education, etc.
23030 23040 90010	Foundation, Geotechnics, Structural material, Maintenance, Building construction method, etc.  Architectural environment and building equipment-related Sound environment, Vibration environment, Light environment, Heat environment, Air environment, Environmental psychology/physiology, Building equipment, Fire engineering, Urban environment, Environment design, etc.  Architectural planning and city planning-related Planning theory, Design theory, Housing theory, Buildings, Urban/regional planning, Administration, Building economics, Production management, Disaster prevention planning, Landscape, etc.  Architectural history and design-related Architectural history, Urban history, Architectural theory, Design, Landscape, Preservation, Renovation, etc.  Design-related Information design, Environmental design, Industrial design, Spatial design, Design history, Theory of design, Design standard, Design support, Evaluation of design, Design education, etc.  tion 24: Aerospace engineering, marine and maritime engineering, and related fields

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on C			Marine engineering-related Navigation, Structural mechanics, Structural design, Production technology, Marine propulsion,
(Broad Section C)		24020	Marine transport, Marine development engineering, Underwater engineering, Polar engineering, Marine environmental technology, etc.
(Br	Mediur	n-sized Sect	tion 25: Social systems engineering, safety engineering, disaster prevention engineering, and related fields
		Basic Section	Examples of related research content
			Social systems engineering-related
		25010	Social systems, Industrial engineering, Operations research, Industrial management, Reliability engineering, Policy science, Regulatory science, Quality control, etc.
			Safety engineering-related
		25020	Safety engineering, Safety system, Risk engineering, Risk management, Work safety, Product safety, Safety information, Human engineering, Liability engineering, etc.
			Disaster prevention engineering-related
		25030	Disaster prediction, Hazard map, Building prevention against disaster, Lifeline prevention against disaster, Regional disaster prevention planning, Risk evaluation of disaster, Disaster prevention policy, Disaster resilience, etc.
Broad	Section	D	
	Mediur	n-sized Sect	tion 26: Materials engineering and related fields
		Basic Section	Examples of related research content
			Metallic material properties-related
		26010	Electric and magnetic properties, Electronic information properties, Metastable states, Diffusion, Phase transformation, Phase diagram, Crystal lattice defects, Mechanical properties, Thermal and optical properties, Materials computational science, etc.
			Inorganic materials and properties-related
		26020	Functional ceramics, Functional glasses, Structural ceramics, Carbon-based materials,
		20020	Crystal structure analysis, Microstructure control, Electric properties, Mechanical properties, Physical and chemical properties, Grain boundary, etc.
			Composite materials and interfaces-related
		26030	Functional composite materials, Structural composite materials, Biocompatible composite materials, Polymer composite, Surface treatment, Dispersion control, Joining and welding, Adhesive bonding, Interface properties, Gradient function, etc.
			Structural materials and functional materials-related
		26040	Social infrastructure materials, Toughness, Medical welfare materials, Functional polymer materials, Reliability, Photo-functional materials, Sensor materials, Energy materials, Battery functional materials, Environment functional materials, etc.
			Material processing and microstructure control-related
		26050	Processing and molding, Thermal treatment, Crystal microstructure control, Laser processing, Precision processing, Polishing, Powder metallurgy, Coatings, Metal plating, Corrosion and protection, etc.
			Metals production and resources production-related
		26060	Separation and purification, Melting and solidifying, Crystal growth, Casting, Resource security reservation, Scarce resources substitution, Low environment impact, Recycle, Ecomaterials, Energy saving, etc.
	Mediur	n-sized Sect	tion 27: Chemical engineering and related fields
		Basic Section	Examples of related research content
			Transport phenomena and unit operations-related
		27010	Phase equilibrium, Transport properties, Momentum/heat/mass transfer, Fluid-phase unit operation, Adsorption, Membrane separation, Mixing, Powder technology, Crystallization, Film formation, etc.

		Chemical reaction and process system engineering-related
	27020	Reaction operation, Novel reaction process, Reaction mechanism, Reactor design, Materials synthesis process, Micro-chemical process, Process control, Process system design,
		Process informatics, etc.
		Catalyst and resource chemical process-related
	27030	Catalysis, Catalyst preparation, Catalytic function, Energy conversion process, Energy development,
	27030	Energy-saving technology, Resources effective utilization technology, etc.
		Biofunction and bioprocess engineering-related
	27040	Biocatalyst engineering, Biofunction engineering, Food engineering, Medicochemical engineering, Bioproduction process, Nano-bioprocess, Bioreactor, Bioseparation, Biosensor, Biorefinery, etc.
Mediun	n-sized Sect	tion 28: Nano/micro science and related fields
	Basic Section	Examples of related research content
		Nanometer-scale chemistry-related
	28010	Nanostructure creation, Clusters, Nanoparticles, Mesoscopic chemistry, Superstructures,
	20010	Nanometer-scale surfaces and interfaces, Self-assembly, Nanocarbons, Molecular devices,
		Nanometer-scale optical devices, etc.
		Nanostructural physics-related
	28020	Physics in nanoscale materials and structures, Nanoprobes, Quantum effects, Quantum dots, Quantum devices, Electron devices, Spin devices, Nanotribology, Nanocarbon physics, etc.
		Nanomaterials-related
	28030	Creation of nanomaterials, Analysis of nanomaterials, Nanosurfaces, Nanointerfaces,
	20030	Functional nanomaterials, Nanostructures, Nanoparticles, Carbon nanomaterials, Nanocrystalline materials, Nanocomposites, Nanodefects, Nanofabrication process, etc.
		Nanobioscience-related
	28040	Biomolecular devices, Molecular manipulation, Molecular imaging, Nanomeasurements, Nanosynthesis, Single molecule science, Nano-bio interfaces, Biomolecular array, Genome engineering, etc.
		Nano/micro-systems-related
	28050	MEMS, NEMS, BioMEMS, Nano/micro-fabrication, Nano/micro-optical devices,
	20030	Nano/micro-chemical systems, Nano/micro-biosystems, Nano/micro-organism systems, Nano/micro-mechanics, Nano/micro-sensors, etc.
Mediun	n-sized Sect	tion 29: Applied condensed matter physics and related fields
	Basic Section	Examples of related research content
		Applied physical properties-related
	29010	Magnetic materials, Superconductors, Dielectrics, Fine particles, Organic molecules, Liquid crystals, New functional materials, Organic molecules and bioelectronics, Spintronics, etc.
		Thin film/surface and interfacial physical properties-related
	29020	Thin-film engineering, Thin-film electronics, Oxide electronics, Vacuum, Surface science, Analysis, Measurement, Nanoscopic technology, Surface and interfacial engineering, Advanced equipment, etc.
		Applied condensed matter physics-related
	29030	Elementary quantities, Standards, Units, Physical quantity measurements and detection,
		Energy conversion, etc.
Mediun	n-sized Sect	tion 30: Applied physics and engineering and related fields
	Basic Section	Examples of related research content
		Crystal engineering-related
	30010	Metals, Semiconductors, Ceramics, Amorphous materials, Crystal growth, Artificial structures, Crystal characterization, Plasma materials engineering, Plasma processing, Plasma engineering, etc.
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		Optical engineering and photon science-related
Mediur	30020	Optical materials, Optical elements, Optical properties, Optical information processing, Laser, Optical sensing, Optical recording, Opto-electronics, Nonlinear optics, Vision optics, etc.
Mediur	m-sized Sect	tion 31: Nuclear engineering, earth resources engineering, energy engineering, and related fields
	Basic Section	Examples of related research content
		Nuclear engineering-related
	31010	Reactor physics and safety design, Thermal-hydraulics and structure, Fuel material, Nuclear chemistry, Nuclear life cycle, Radiation safety, Radiation beam engineering, Plasma engineering for fusion reactor, Equipment and material engineering for fusion reactor, Nuclear social environment, etc.
		Earth resource engineering, Energy sciences-related
	31020	Earth resource sciences, Resource prospecting, Resource development, Resource cycle, Resource economy, Energy system, Environmental load evaluation, Renewable energy, Natural resource and energy technological policy, etc.
Mediur	m-sized Sect	tion 90: Biomedical engineering and related fields
	Basic Section	Examples of related research content
		Biomedical engineering-related
	90110	Medical imaging, Medical modeling, Biological simulation, Biometrics, Artificial organs, Tissue engineering, Biophysical properties, Biocontrol, Biomechanics, Nanobio systems, etc.
		Biomaterials-related
	90120	Biofunctional materials, Tissue engineering materials, Biocompatible materials, Nanobio materials, Drug delivery systems, Stimuli-sensitive materials, Genetic engineering material, etc.
		Medical systems-related
	90130	Medical ultrasound system, Diagnostic imaging system, Laboratory diagnosis systems, Minimally invasive treatment systems, Remote diagnosis and treatment systems, Organ preservation systems, Medical information systems, Computer-assisted surgery, Medical robot, etc.
		Medical technology assessment-related
	90140	Regulatory science, Safety evaluation, Clinical study, Medical technology ethics, Medical devices, etc.
		Medical assistive technology-related
	90150	Healthcare and rehabilitation engineering, Life assist technology, Care support technology, Accessibility design, Universal design, Rehabilitation and nursing robot, Assist device for artificial internal organ, Rehabilitation devices, Nursing science and engineering, etc.
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Mediur	m-sized Sect	tion 32: Physical chemistry, functional solid state chemistry, and related fields
	Basic Section	Examples of related research content
		Fundamental physical chemistry-related
	32010	Theoretical chemistry, Molecular spectroscopy, Structural chemistry, Electronic state dynamics, Chemical reaction dynamics, Surface/interface, Cluster and nano materials, Bio-related physical chemistry, Liquid structure dynamics, Solid state properties, Molecular properties, etc.

Optical properties, Electron spin, Molecular electronics and devices, Supermolecules, Liquid crystals, Crystals, Surface/interface, Nano particles, Colloids, Electrochemistry, Electronic properties, etc.

Functional solid state chemistry-related

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	Basic	
	Section	Examples of related research content
		Structural organic chemistry and physical organic chemistry-related
	33010	Organic crystals, Molecular recognition, Supermolecules, Organic functional materials, Extended p-electron system compounds, Heterocyclic chemistry, Organoelement chemistry, Organic reaction mechanism, Organic photochemistry, Theoretical organic chemistry, etc.
		Synthetic organic chemistry-related
	33020	Selective reactions, Asymmetric synthesis, Organometallic complex/catalysis, Catalyst design, Organocatalysts, Biocatalysis, Sustainable organic synthesis, Natural product synthesis, Process chemistry, Organic electrochemistry, etc.
Mediu	ım-sized Sect	tion 34: Inorganic/coordination chemistry, analytical chemistry, and related fields
	Basic Section	Examples of related research content
		Inorganic/coordination chemistry-related
	34010	Coordination chemistry, Organometallic chemistry, Inorganic solid-state chemistry, Bioinorganic chemistry, Solution chemistry, Clusters, Supramolecular complexes, Coordination polymers, Typical elements, Physical properties and functions, etc.
		Analytical chemistry-related
	34020	Spectrometric analysis, Advanced measurements, Surface/interface analysis, Separation analysis, Analytical reagents, Radiochemical analysis, Electrochemical analysis, Bioanalysis, New analysis methods, etc
		Green sustainable chemistry and environmental chemistry-related
	34030	Green process, Green catalysts, Recycle, Environmental assessment, Environmentally conscious materials, Reduction of environmental load, Environmental restoration, Resource saving, Geochemistry, Environmental radioactivity, etc.
Mediu	ım-sized Sect	tion 35: Polymers, organic materials, and related fields
	Basic Section	Examples of related research content
		Polymer chemistry-related
		•
	Section	Polymer chemistry-related Polymer synthesis, Polymer reactions, Precision polymerization, Functional polymers, Self-assembled polymers, Chiral polymers, Bio-related polymers, Polymer properties,
	Section	Polymer chemistry-related Polymer synthesis, Polymer reactions, Precision polymerization, Functional polymers, Self-assembled polymers, Chiral polymers, Bio-related polymers, Polymer properties, Polymer structures, Polymer thin film/surface, etc.
	Section 35010	Polymer chemistry-related Polymer synthesis, Polymer reactions, Precision polymerization, Functional polymers, Self-assembled polymers, Chiral polymers, Bio-related polymers, Polymer properties, Polymer structures, Polymer thin film/surface, etc.  Polymer materials-related Properties of polymer materials, Synthesis of polymer materials, Functional polymer materials, Liquid crystal polymers, Textiles, Rubbers,
	Section 35010	Polymer chemistry-related  Polymer synthesis, Polymer reactions, Precision polymerization, Functional polymers, Self-assembled polymers, Chiral polymers, Bio-related polymers, Polymer properties, Polymer structures, Polymer thin film/surface, etc.  Polymer materials-related  Properties of polymer materials, Synthesis of polymer materials, Functional polymer materials, Liquid crystal polymers, Textiles, Rubbers, Gel, Biopolymers, Polymer composites, Polymer processing, etc.
Mediu	35010 35020 35030	Polymer chemistry-related Polymer synthesis, Polymer reactions, Precision polymerization, Functional polymers, Self-assembled polymers, Chiral polymers, Bio-related polymers, Polymer properties, Polymer structures, Polymer thin film/surface, etc.  Polymer materials-related Properties of polymer materials, Synthesis of polymer materials, Functional polymer materials, Liquid crystal polymers, Textiles, Rubbers, Gel, Biopolymers, Polymer composites, Polymer processing, etc.  Organic functional materials-related Organic semiconductors, Liquid crystals, Optical materials, Device-related materials, Electrically conductive materials, Hybrid materials, Molecular functional materials,
Mediu	35010 35020 35030	Polymer chemistry-related Polymer synthesis, Polymer reactions, Precision polymerization, Functional polymers, Self-assembled polymers, Chiral polymers, Bio-related polymers, Polymer properties, Polymer structures, Polymer thin film/surface, etc.  Polymer materials-related Properties of polymer materials, Synthesis of polymer materials, Functional polymer materials, Liquid crystal polymers, Textiles, Rubbers, Gel, Biopolymers, Polymer composites, Polymer processing, etc.  Organic functional materials-related  Organic semiconductors, Liquid crystals, Optical materials, Device-related materials, Electrically conductive materials, Hybrid materials, Molecular functional materials, Organic hybrid materials, Materials for energy conversion, etc.
Mediu	35010 35020 35030 am-sized Sect	Polymer chemistry-related Polymer synthesis, Polymer reactions, Precision polymerization, Functional polymers, Self-assembled polymers, Chiral polymers, Bio-related polymers, Polymer properties, Polymer structures, Polymer thin film/surface, etc.  Polymer materials-related Properties of polymer materials, Synthesis of polymer materials, Functional polymer materials, Liquid crystal polymers, Textiles, Rubbers, Gel, Biopolymers, Polymer composites, Polymer processing, etc.  Organic functional materials-related Organic semiconductors, Liquid crystals, Optical materials, Device-related materials, Electrically conductive materials, Hybrid materials, Molecular functional materials, Organic hybrid materials for energy conversion, etc.  tion 36: Inorganic materials chemistry, energy-related chemistry, and related fields  Examples of related research content  Inorganic compounds and inorganic materials chemistry-related
Mediu	35010 35020 35030 am-sized Sect	Polymer chemistry-related Polymer synthesis, Polymer reactions, Precision polymerization, Functional polymers, Self-assembled polymers, Chiral polymers, Bio-related polymers, Polymer properties, Polymer structures, Polymer thin film/surface, etc.  Polymer materials-related Properties of polymer materials, Synthesis of polymer materials, Functional polymer materials, Liquid crystal polymers, Textiles, Rubbers, Gel, Biopolymers, Polymer composites, Polymer processing, etc.  Organic functional materials-related Organic semiconductors, Liquid crystals, Optical materials, Device-related materials, Electrically conductive materials, Hybrid materials, Molecular functional materials, Organic hybrid materials chemistry, energy-related chemistry, and related fields  Examples of related research content
Mediu	35010 35020 35030 am-sized Section	Polymer chemistry-related Polymer synthesis, Polymer reactions, Precision polymerization, Functional polymers, Self-assembled polymers, Chiral polymers, Bio-related polymers, Polymer properties, Polymer structures, Polymer thin film/surface, etc.  Polymer materials-related Properties of polymer materials, Synthesis of polymer materials, Functional polymer materials, Liquid crystal polymers, Textiles, Rubbers, Gel, Biopolymers, Polymer composites, Polymer processing, etc.  Organic functional materials-related Organic semiconductors, Liquid crystals, Optical materials, Device-related materials, Electrically conductive materials, Hybrid materials, Molecular functional materials, Organic hybrid materials, Materials for energy conversion, etc.  Inorganic materials chemistry, energy-related chemistry, and related fields  Examples of related research content  Inorganic compounds and inorganic materials chemistry-related Crystals, Amorphous, Ceramics, Semiconductors, Inorganic device-related materials, Low-dimensional compounds, Porous materials, Nanoparticles, Multicomponent compounds,

	Basic Section	Examples of related research content
	3000000	Bio-related chemistry
	37010	Bioorganic chemistry, Bioinorganic chemistry, Biological reaction engineering, Biofunctional chemistry, Biofunctional materials, Biotechnology, etc.
		Chemistry and chemical methodology of biomolecules-related
	37020	Natural product chemistry, Biologically active compounds, Molecular mechanism of biological activities, Biofunctional molecules, Combinatorial chemistry, Metabolomic analysis, etc.
		Chemical biology-related
	37030	In vivo functional expression, Intracellular chemical reactions, Drug discovery science, Chemical library, Structure-activity relationship, Chemical probes, Biomolecular measurements, Molecular imaging, Proteomics, etc.
Section	F	
Mediu	m-sized Sect	tion 38: Agricultural chemistry and related fields
	Basic Section	Examples of related research content
		Plant nutrition and soil science-related
	38010	Plant metabolism and physiology, Nutritional elements in plants, Soil classification, Soil physical chemistry, Soil organisms, etc.
		Applied microbiology-related
	38020	Microbial genetics/breeding, Microbial function, Microbial metabolism and physiology, Microbial applications Control of microbes, Microbial ecology, Production of useful materials, etc.
		Applied biochemistry-related
	38030	Cellular biochemistry, Applied biochemistry, Structural biology, Regulation of bioactivity, Metabolism and physiology, Cellular function, Molecular function, Production of useful materials, etc.
		Bioorganic chemistry-related
	38040	Bioactive substances, Signal molecules, Natural products chemistry, Biosynthesis, Structure-activity relationship, Synthetic organic chemistry, Chemical biology, etc.
		Food sciences-related
	38050	Food function, Food chemistry, Nutritional chemistry, Food analysis, Food engineering, Food safety, Functional food, Nutritional epidemiology, Clinical nutrition, etc.
		Applied molecular and cellular biology-related
	38060	Molecular cell biology, Cellular bioengineering, Molecular engineering, Gene expression control, Cell-cell/intermolecular interactions, Cellular function, Production of useful materials, etc.
Mediu	m-sized Sect	tion 39: Agricultural and environmental biology and related fields
	Basic Section	Examples of related research content
		Science in plant genetics and breeding-related
	39010	Genetic resources, Breeding theories, Genomic breeding, Plants with novel traits, Quality components, Stress tolerance, Yielding ability, Reproduction and multiplication, Growth physiology, Development, etc.
		Crop production science-related
	39020	Field crops, Crop yield, Crop product quality, Crop morphology, Growth prediction, Crop physiology, Field management, Low-cost cultivation techniques, Environmentally friendly agriculture, Field ecosystem, etc
		Horticultural science-related
		Plant growth, flowering, and fruit development, Nursery plant propagation and production,
	39030	Crop production systems, Cultivation techniques, Protected horticulture, Controlled environment systems,

		Plant protection science-related
	39040	Plant pathology, Clinical plant science, Agricultural insect pest, Natural enemy, Weed, Agricultural chemicals, Integrated pest management, etc.
		Insect science-related
	39050	Sericulture insect technology, Insect genetics, Insect pathology, Insect physiology and biochemistry, Insect ecology, Chemical ecology, Systematics, Symbiosis and parasitism, Social insects, Medical entomology, etc.
		Conservation of biological resources-related
	39060	Conservation biology, Biodiversity conservation, Conservation of phylogenetic diversity, Conservation of genetic resources, Ecosystem conservation, Conservation of endemic species, Conservation of microorganisms, etc.
		Landscape science-related
	39070	Landscape architecture, Parks and open space planning, Landscape planning, Cultural landscape, Nature conservation, Landscape ecology, Parks and open space management, Parks, Environmental greening, Participatory community design, etc.
Mediur		tion 40: Forestry and forest products science, applied aquatic science, and related fields
	Basic Section	Examples of related research content
		Forest science-related
	40010	Forest ecology, Forest biodiversity, Forest genetics and breeding, Silviculture, Forest protection, Forest environments, Erosion control, Forest planning, Forest policy, etc.
		Wood science-related
	40020	Wood structure, Wood property, Lignocellulose, Trace element, Fungus, Wood processing, Biomass-refinery, Wood based material, Wooden building, Forest products education, etc.
		Aquatic bioproduction science-related
	40030	Aquatic environment, Fisheries, Aquatic resource management, Aquatic organisms, Aquatic ecosystem, Aquaculture, Fisheries engineering, Fishing community/fisheries policy, Fisheries economics/management/marketing, Fisheries education, etc.
		Aquatic life science-related
	40040	Aquatic nutrition, Aquatic pathology, Aquatic genetics/heredity/breeding, Aquatic physiology, Utilization of aquatic organisms and biomass, Aquatic biological chemistry, Aquatic biotechnology, Aquatic food sciences, etc.
Mediur	m-sized Sect	ion 41: Agricultural economics and rural sociology, agricultural engineering, and related fields
	Basic Section	Examples of related research content
		Agricultural and food economics-related
	41010	Food economy, Agricultural production economy, Policy for agriculture, forestry and fishery, Food system, Food marketing, International agricultural development, Trade of agricultural commodities and livestock products, Rural resources and environment, etc.
		Rural sociology and agricultural structure-related
	41020	Farm organization, Farm management, Agricultural structure, Agricultural market, Agricultural history, Rural society, Rural life, Agricultural cooperative, etc.
		Rural environmental engineering and planning-related
	41030	Irrigation and drainage, Reclamation and conservation of agricultural land, Rural planning, Rural environment, Circulation of resources and energy, Disaster prevention in rural area, Stock management of agricultural infrastructures, Hydrodynamics and hydrology, Soil physics, Design and construction materials, etc.
		Agricultural environmental engineering and agricultural information engineering-related
	41040	Agricultural production facilities, Bioproduction machinery, Environmental control, Agricultural meteorology and micrometeorology, Agricultural information, Greenhouse horticulture, Plant factory, Postharvest and supply chain, Nondestructive measurement, Remote sensing and geographic information system, etc.
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E		Environmental agriculture-related				
ion J		Biomass, Environmental manipulation, Biodiversity, Environmental analysis, Ecosystem services,				
(Broad Section F)	4105	Resources circulation system, Low-carbon societies, Life-cycle assessment, Environmental friendly agriculture, Watershed management, etc.				
(Br	Medium-sized Section 42: Veterinary medical science, animal science, and related fields					
	Basic Section	Examples of related research content				
		Animal production science-related				
	4201	Breeding/genetics, Reproduction, Nutrition/feeding, Anatomy/physiology, Product, Environment, Behavior, Therapy, Grassland, Grazing, etc.				
		Veterinary medical science-related				
	4202	Basic veterinary science, Pathological veterinary science, Applied veterinary science, Clinical veterinary science, Animal nursing, Animal welfare, Wildlife, etc.				
		Animal life science-related				
	4203	Homeostasis, Cellular function, Biological defense, Integrated genetics, Development/differentiation, Biotechnology, etc.				
		Laboratory animal science-related				
	4204	Genetic engineering, Developmental engineering, Animal models of disease, Facility management, Laboratory animal welfare, Laboratory animal-related technology, Bioresource, etc.				
road	Section G					
	Medium-sized S	Section 43: Biology at molecular to cellular levels, and related fields				
	Basic Section	Examples of related research content				
		Molecular biology-related				
	4301	Chromosome function, Chromatin, Epigenetics, Genome maintenance, Genome transmission, Chromosome re-organization, Gene expression, Non-coding RNA, Regulation of protein function, Molecular genetics, etc.				
		Structural biochemistry-related				
	4302	Proteins, Nucleic acids, Lipids, Carbohydrates, Biological membrane, Molecular recognition, Denaturation, Three-dimensional structural analysis, Three-dimensional structural prediction, Molecular dynamics, etc.				
		Functional biochemistry-related				
	4303	Enzymes, Sugar chain, Bioenergy conversion, Biological trace elements, Physiologically active substances, Cell signaling, Membrane transport, Proteolysis, Molecular recognition, etc.				
		Biophysics-related				
	4304	Structure biology, Physical property of biomolecules, Biomembrane, Photobiology, Molecular motor, Biometrics, Bioimaging, Systems biology, Synthetic biology, Theoretical biology, etc.				
		Genome biology-related				
	4305					
	4306	System genome science-related  Network analyses, Synthetic biology, Biological databases, Bioinformatics, Genome analysis technology, Genome biotechnology, etc.				
	Medium-sized Section 44: Biology at cellular to organismal levels, and related fields					
	Basic Section	Examples of related research content				
		Cell biology-related				
	4401	Cytoskeleton, Proteolysis, Organelle dynamics, Nuclear structure and function, Extracellular matrix, Signal transduction, Cell cycle, Cell motility, Cell-cell interaction, Cellular genetics, etc.				

		Developmental biology-related
	44020	Cell differentiation, Stem cells, Regeneration, Germ layer formation, Morphogenesis, Organogenesis, Fertilization, Germ cells, Regulation of gene expression, Developmental genetics, Evolution and development, etc.
		Plant molecular biology and physiology-related
	44030	Photosynthesis, Growth physiology, Plant development, Organelle, Cell wall, Responses to environment, Plant-microbe interaction, Metabolism, Plant molecular function, etc.
ŀ		Morphology and anatomical structure-related
	44040	Animal and plant morphology, Micro-organismal morphology, Molecular morphology, Microstructure, Tissue organization, Morphogenesis, Comparative endocrinology, Microscopic technology, Imaging, etc.
		Animal physiological chemistry, physiology and behavioral biology-related
	44050	Metabolic physiology, Neurophysiology, Neuroethology, Behavioral physiology, Animal physiological chemistry, Chronobiology, Comparative physiology, etc.
Mediun	m-sized Sect	ion 45: Biology at organismal to population levels and anthropology, and related fields
	Basic Section	Examples of related research content
		Genetics-related
	45010	Genetic mechanism, Molecular genetics, Cellular genetics, Population genetics, Evolutionary genetics, Developmental genetics, Behavioral genetics, Genetic diversity, etc.
		Evolutionary biology-related
	45020	General evolutionary biology, Molecular evolution, Phenotypic evolution, Evolution of developmental traits, Evolution of ecological traits, Evolution of behaviors, Experimental evolution, Evolutionary theory, Evolution of symbiosis, Phylogenetics, Speciation, etc.
		Biodiversity and systematics-related
	45030	Taxonomic characters, Taxon, Classification system, Biodiversity, Phylogenetics, Evolution, Natural history, Speciation, etc.
		Ecology and environment-related
	45040	Chemical ecology, Molecular ecology, Physiological ecology, Evolutionary ecology, Behavioral ecology, Population ecology, Community ecology, Ecosystem, Conservation ecology, Natural environment, etc.
•		Physical anthropology-related
	45050	Molecular anthropology and genetics, Morphology and function, Bioarchaeology, Behavior and cognition, Ecology, Primates, Evolution, Development and ontogeny, Variation and diversity, etc.
		Applied anthropology-related
	45060	Physiological anthropology, Ergonomics, Forensic anthropology, Medical anthropology, Physiological polymorphisms, Environmental adaptability, Somatic and physiological function, Anthropometry and bioengineering, etc.
Mediun	n-sized Sect	ion 46: Neuroscience and related fields
	Basic Section	Examples of related research content
		Neuroscience-general-related
	46010	Neurochemistry, Neuron, Glia, Genome, Epigenetics, Neurobiology, Information processing, Synapse, Neurogenesis, etc.
		Anatomy and histopathology of nervous system-related
	46020	Neural development, Anatomy of nervous system, Neural network structure, Neuropathology, etc.
		Function of nervous system-related
	46030	Neurophysiology, Neuropharmacology, Neurotransmission, Neuroinformatics, Behavioral neuroscience, Neural system physiology, Cerebral blood flow, Autonomic nervous system, etc.

Mediun		
г	m-sized Sect	tion 47: Pharmaceutical sciences and related fields
	Basic Section	Examples of related research content
		Pharmaceutical chemistry and drug development sciences-related
	47010	Inorganic chemistry, Organic chemistry, Medicinal chemistry, Medicinal molecular design, Drug discovery, Bio-related materials, Chemical biology, etc.
		Pharmaceutical analytical chemistry and physicochemistry-related
	47020	Environmental analysis, Bioanalysis, Physicochemistry, Biophysics, Structural biology, Radiochemistry, Bioimaging, Drug formulation design, Computer science, Information science, etc.
		Pharmaceutical hygiene and biochemistry-related
	47030	Environmental hygiene, Healthful nutrition, Disease prevention, Toxicology, Drug metabolism, Host defense, Molecular biology, Cell biology, Biochemistry, etc.
Ī		Pharmacology-related
	47040	Pharmacology, Pharmacogenomics, Applied pharmacology, Signal transduction, Drug interactions, Drug response, Pharmacotherapy, Pharmacotoxicology, etc.
		Environmental and natural pharmaceutical resources-related
	47050	Environmental resource science, Natural products chemistry, Bioactive natural compounds, Medicinal resources Medicinal foods, Pharmaceutical microbiology, etc.
Ī		Clinical pharmacy-related
	47060	Pharmacokinetics, Medical informatics, Social pharmacy, Clinical pharmacy, Pharmaceutics, Regulatory science Education for the pharmacist, etc.
Mediun		
	n-sized Sect	tion 48: Biomedical structure and function and related fields
Г		tion 48: Biomedical structure and function and related fields
vicaran	n-sized Sect Basic Section	Examples of related research content
	Basic	
	Basic	Examples of related research content
	Basic Section	Examples of related research content  Anatomy-related  Macroscopic anatomy, Histology, Embryology, etc.
	Basic Section	Examples of related research content  Anatomy-related
	Basic Section 48010	Examples of related research content  Anatomy-related  Macroscopic anatomy, Histology, Embryology, etc.  Physiology-related  General physiology, Pathophysiology, Comparative physiology, Environmental physiology, etc.
	Basic Section 48010 48020	Examples of related research content  Anatomy-related  Macroscopic anatomy, Histology, Embryology, etc.  Physiology-related  General physiology, Pathophysiology, Comparative physiology, Environmental physiology, etc.  Pharmacology-related
	Basic Section 48010	Examples of related research content  Anatomy-related  Macroscopic anatomy, Histology, Embryology, etc.  Physiology-related  General physiology, Pathophysiology, Comparative physiology, Environmental physiology, etc.
	Basic Section 48010 48020	Examples of related research content  Anatomy-related  Macroscopic anatomy, Histology, Embryology, etc.  Physiology-related  General physiology, Pathophysiology, Comparative physiology, Environmental physiology, etc.  Pharmacology-related  Genomic pharmacology, Molecular and cellular pharmacology, Pathological pharmacology, Behavioral pharmacology, Pharmacology for drug discovery, Clinical pharmacology, etc.
	Basic Section 48010 48020	Examples of related research content  Anatomy-related Macroscopic anatomy, Histology, Embryology, etc.  Physiology-related General physiology, Pathophysiology, Comparative physiology, Environmental physiology, etc.  Pharmacology-related Genomic pharmacology, Molecular and cellular pharmacology, Pathological pharmacology, Behavioral pharmacology, Pharmacology for drug discovery, Clinical pharmacology, etc.  Medical biochemistry-related
	Basic Section  48010  48020  48030	Examples of related research content  Anatomy-related Macroscopic anatomy, Histology, Embryology, etc.  Physiology-related General physiology, Pathophysiology, Comparative physiology, Environmental physiology, etc.  Pharmacology-related Genomic pharmacology, Molecular and cellular pharmacology, Pathological pharmacology, Behavioral pharmacology, Pharmacology for drug discovery, Clinical pharmacology, etc.  Medical biochemistry-related
	Basic Section  48010  48020  48030	Examples of related research content  Anatomy-related Macroscopic anatomy, Histology, Embryology, etc.  Physiology-related General physiology, Pathophysiology, Comparative physiology, Environmental physiology, etc.  Pharmacology-related Genomic pharmacology, Molecular and cellular pharmacology, Pathological pharmacology, Behavioral pharmacology, Pharmacology for drug discovery, Clinical pharmacology, etc.  Medical biochemistry-related Biofunctional molecular and medical biochemistry, Genome medical sciences, Human genetics, Disease model,
	Basic Section  48010  48020  48030  48040  m-sized Section	Examples of related research content  Anatomy-related  Macroscopic anatomy, Histology, Embryology, etc.  Physiology-related  General physiology, Pathophysiology, Comparative physiology, Environmental physiology, etc.  Pharmacology-related  Genomic pharmacology, Molecular and cellular pharmacology, Pathological pharmacology, Behavioral pharmacology, Pharmacology for drug discovery, Clinical pharmacology, etc.  Medical biochemistry-related  Biofunctional molecular and medical biochemistry, Genome medical sciences, Human genetics, Disease model, tion 49: Pathology, infection/immunology, and related fields
	Basic Section  48010  48020  48030  48040  m-sized Section	Examples of related research content  Anatomy-related  Macroscopic anatomy, Histology, Embryology, etc.  Physiology-related  General physiology, Pathophysiology, Comparative physiology, Environmental physiology, etc.  Pharmacology-related  Genomic pharmacology, Molecular and cellular pharmacology, Pathological pharmacology, Behavioral pharmacology, Pharmacology for drug discovery, Clinical pharmacology, etc.  Medical biochemistry-related  Biofunctional molecular and medical biochemistry, Genome medical sciences, Human genetics, Disease model, tion 49: Pathology, infection/immunology, and related fields  Examples of related research content
	Basic Section  48010  48020  48030  48040  m-sized Section  Basic Section	Examples of related research content  Anatomy-related  Macroscopic anatomy, Histology, Embryology, etc.  Physiology-related  General physiology, Pathophysiology, Comparative physiology, Environmental physiology, etc.  Pharmacology-related  Genomic pharmacology, Molecular and cellular pharmacology, Pathological pharmacology, Behavioral pharmacology, Pharmacology for drug discovery, Clinical pharmacology, etc.  Medical biochemistry-related  Biofunctional molecular and medical biochemistry, Genome medical sciences, Human genetics, Disease model, tion 49: Pathology, infection/immunology, and related fields  Examples of related research content  Pathological biochemistry-related

H)			Experimental pathology-related		
(Broad Section H)	400	49030	Disease models, Pathological regulation, Tissue regeneration, etc.		
	47030	030	bisease models, I amorogical regulation, 1 issue regeneration, etc.		
			Parasitology-related		
	490	040	Parasite, Vector organism, Parasite pathogenicity, Epidemiology of parasites, Control of parasite infections, etc.		
			Bacteriology-related		
	490	050	Bacterium, Fungus, Antimicrobial resistance, Bacterial pathogenicity, Epidemiology of bacteria, Control of bacterial infections, etc.		
			Virology-related		
	490	060	Virus, Prion, Viral pathogenicity, Epidemiology of viruses, Control of viral infections, etc.		
			Immunology-related		
	490	070	Immune system, Immune response, Inflammation, Immune-related disorder, Immune regulation, etc.		
Broad	Section I				
	Medium-sized	d Sect	ion 50: Oncology and related fields		
		sic tion	Examples of related research content		
			Tumor biology-related		
	500	010	Cancer and gene, Tumor development, Invasion, Metastasis, Cancer microenvironment, Cancer and signal transduction, Characteristics of cancer cells, etc.		
			Tumor diagnostics and therapeutics-related		
	500	020	Genome analysis, Diagnostic markers, Molecule imaging, Chemotherapy, Nucleic acid therapy, Gene therapy, Immunotherapy, Molecular targeted therapy, Physical therapy, Radiation therapy, etc.		
	Medium-sized Section 51: Brain sciences and related fields				
		sic tion	Examples of related research content		
			Basic brain sciences-related		
	510	010	Brain-machine interface, Model animal, Computational brain science, Brain information decoding, Control technologies, Brain imaging, Brain biometrics, etc.		
			Cognitive and brain science-related		
	510	020	Social behavior, Communication, Emotion, Decision making, Consciousness, Learning, Neuroeconomics, Neuropsychology, etc.		
			Pathophysiologic neuroscience-related		
	510	030	Clinical neuroscience, Dolorology, Sensory impairment, Movement disorder, Neurological disorder, Neurogenesis, Neuroimmunology, Cellular degeneration, Disease model, etc.		
	Medium-sized	d Sect	ion 52: General internal medicine and related fields		
		sic tion	Examples of related research content		
			General internal medicine-related		
	520	010	Laboratory medicine, General practice, Geriatrics, Psychosomatic internal medicine, Oriental medicine, Palliative medicine, etc.		
			Neurology-related		
	520	020	Neurology, Neurofunctional imaging, etc.		

Medium-sized Section 55: Surgery of the organs maintaining homeostasis and related fields

Basic Section	Examples of related research content
	General surgery and pediatric surgery-related
55010	Surgical basic principles, Breast surgery, Endocrine surgery, Pediatric surgery, Transplant surgery, Artificial organs science, Regeneration, Operation support, etc.

	Digestive surgery-related
55020	Upper gastrointestinal surgery, Lower gastrointestinal surgery, Hepatic surgery, Biliary surgery,
33020	Pancreatic surgery, etc.
	Cardiovascular surgery-related
55030	Coronary artery surgery, Heart valve surgery, Surgery for myocardial disease, Aortic surgery, Vascular surgery, Congenital heart surgery, etc.
	Respiratory surgery-related
55040	Lung surgery, Mediastinal surgery, Chest wall surgery, Respiratory tract surgery, etc.
	Anesthesiology-related
55050	Anesthesiology, Perioperative management, Pain management, Resuscitology, Palliative medicine, etc.
	Emergency medicine-related
55060	Intensive care medicine, Emergency resuscitation science, Trauma surgery, Disaster medicine, Disaster medical care, etc.
ım-sized Sect	tion 56: Surgery related to the biological and sensory functions and related fields
Basic Section	Examples of related research content
	Neurosurgery-related
56010	Neurosurgery, Spine and spinal cord diseases, etc.
	Orthopedics-related
56020	Orthopedics, Rehabilitation medicine, Sports medicine, etc.
	Urology-related
56030	Urology, Male genitalia science, etc.
	Obstetrics and gynecology-related
56040	Obstetrics, Reproductive endocrinology, Gynecologic oncology, Female health care medicine, etc.
	Otorhinolaryngology-related
56050	Otorhinolaryngology, Head and neck surgery, etc.
	Ophthalmology-related
56060	Ophthalmology, Ophthalmological optics, etc.
	Plastic and reconstructive surgery-related
56070	Plastic surgery, Reconstructive surgery, Aesthetic plastic surgery, etc.
ım-sized Sect	tion 57: Oral science and related fields
Basic Section	Examples of related research content
	Oral biological science-related
57010	Oral anatomy, Oral histology and embryology, Oral physiology, Oral biochemistry, Pharmacology for hard tissues, etc.
	Oral pathobiological science-related
	Oral infectious diseases, Oral pathology, Oral experimental oncology, Immunity and inflammation,

		Conservative dentistry-related
	57030	Operative dentistry, Endodontology, Periodontology, etc.
		Regenerative dentistry and dental engineering-related
	57040	Regenerative dentistry, Biomaterial science, Dental materials science, Oral and maxillofacial prosthetics, Oral implantology, etc.
Ē		Prosthodontics-related
	57050	Prosthodontics, Oral rehabilitation, Gerodontology, etc.
ŀ		Surgical dentistry-related
	57060	Oral and maxillofacial surgery, Oral maxillofacial reconstructive surgery, Dental anesthesiology, Psychosomatic medicine dentistry, Dental radiology, etc.
-		Developmental dentistry-related
	57070	Orthodontics, Pediatric dentistry, etc.
=		Social dentistry-related
	57080	Dental hygiene, Preventive dentistry, Oral health administration and management, Dental education, Forensic odontology, etc.
Mediun	n-sized Sect	tion 58: Society medicine, nursing, and related fields
	Basic Section	Examples of related research content
		Medical management and medical sociology-related
	58010	Medical management, Medical social science, Ethics for medical science, Ethics for medical care, Biomedical education, History of medical science, Health policy and economics, Clinical trials, Health and medical services administration, Disaster medical science, etc.
-		Hygiene and public health-related: including laboratory approach
	58020	Hygiene, Public health, Epidemiology, Global health, etc.
=		Hygiene and public health-related: excluding laboratory approach
	58030	Hygiene, Public health, Epidemiology, Global health, etc.
ŀ		Forensics medicine-related
	58040	Forensic medicine, Forensic pathology, Forensic toxicology, Forensic genetics, Suicide, Abuse, Clinical forensic medicine, Sudden death, etc.
Ī		Fundamental of nursing-related
	58050	Fundamental of nursing, Nursing education, Nursing administration, etc.
-		Clinical nursing-related
	58060	Critical care and emergency nursing, Perioperative nursing, Nursing of chronic illness, Oncology nursing, Psychiatric nursing, Palliative care nursing, etc.
ŀ		Lifelong developmental nursing-related
	58070	Women's health nursing, Maternal nursing, Midwifery, Family health nursing, Child health nursing, School nursing, etc.
}		Gerontological nursing and community health nursing-related
	58080	Gerontological nursing, Community health nursing, Public health nursing, Disaster nursing, etc.

	Basic	Examples of related research content
	Section	
		Rehabilitation science-related
	59010	Rehabilitation medicine, Rehabilitation nursing, Rehabilitation medical care, Physicotherapeutics, Occupational therapy, Assistive technology, Speech and language therapy, etc.
		Sports sciences-related
	59020	Sports physiology, Sports biochemistry, Sports medicine, Sports sociology, Sports management, Sports psychology, Sports education, Training science, Sports biomechanics, Adapted sports science, Doping,
		Physical education, and physical and health education-related
	59030	Growth developmental science, Physical and health education, Physical education in school, Educational physiology, Physical systems science, Higher brain function science, Martial arts theory, Outdoor education, etc.
		Nutrition science and health science-related
	59040	Nutritional physiology, Nutritional biochemistry, Nutritional education, Clinical nutrition, Functional food, Lifestyle-related disease, Health promotion, Aging, etc.
Mediu	m-sized Sect	tion 90: Biomedical engineering and related fields
	Basic Section	Examples of related research content
		Biomedical engineering-related
	90110	Medical imaging, Medical modeling, Biological simulation, Biometrics, Artificial organs, Tissue engineering, Biophysical properties, Biocontrol, Biomechanics, Nanobio systems, etc.
		Biomaterials-related
	90120	Biofunctional materials, Tissue engineering materials, Biocompatible materials, Nanobio materials, Drug delivery systems, Stimuli-sensitive materials, Genetic engineering material, etc.
		Medical systems-related
	90130	Medical ultrasound system, Diagnostic imaging system, Laboratory diagnosis systems, Minimally invasive treatment systems, Remote diagnosis and treatment systems, Organ preservation systems, Medical information systems, Computer-assisted surgery, Medical robot, etc.
		Medical technology assessment-related
	90140	Regulatory science, Safety evaluation, Clinical study, Medical technology ethics, Medical devices, etc.
		Medical assistive technology-related
	90150	Healthcare and rehabilitation engineering, Life assist technology, Care support technology, Accessibility desig Universal design, Rehabilitation and nursing robot, Assist device for artificial internal organ, Rehabilitation de Nursing science and engineering, etc.
Section	ı J	
Mediu	m-sized Sect	tion 60: Information science, computer engineering, and related fields
	Basic Section	Examples of related research content
		Theory of informatics-related
1	60010	Discrete structure, Mathematical logic, Theory of computation, Mathematical theory of programs, Computational complexity theory, Algorithm theory, Information theory, Coding theory, Theory of cryptograp

Optimization theory, Mathematical systems theory, System control theory, System analysis, System methodology, System modeling, System simulation, Combinatorial optimization, Queueing theory, Mathematical finance, etc.

Mathematical informatics-related

60020

	Statistical science-related		
60030	Statistics, Data science, Modeling, Statistical inference, Multivariate analysis, Time series analysis, Statistical quality control, Applied statistics, etc.		
	Computer system-related		
60040	Computer architecture, Circuit and system, LSI design, LSI testing, Reconfigurable system, Dependable architecture, Low power technology, Hardware/software codesign, Embedded system, etc.		
	Software-related		
60050	Programming language, Programming methodology, Operating system, Parallel and distributed computing, Software engineering, Virtualization technology, Cloud computing, Software dependability, Software security, etc.		
	Information network-related		
60060	Network architecture, Network protocol, Internet, Mobile network, Pervasive computing, Sensor network, IoT, Traffic engineering, Network management, Service platform technology, etc.		
	Information security-related		
60070	Cryptography, Tamper resistance technology, Authentication, Biometrics, Access control, Malware countermeasure, Countermeasures against denial-of-service attacks, Privacy protection, Digital forensics, Security evaluation and authorization, etc.		
	Database-related Database-related		
60080	Data model, Database system, Multimedia database, Information retrieval, Content management, Metadata, Big data, Geographic information system, etc.		
	High performance computing-related		
60090	Parallel processing, Distributed processing, Cloud computing, Numerical analysis, Visualization, Computer graphics, High performance computing application, etc.		
	Computational science-related		
60100	Mathematical engineering, Computational mechanics, Numerical simulation, Multi-scale modeling, Large-scale computing, Massively parallel computing, Numerical computing methods, Advanced algorithms, etc.		

### Medium-sized Section 61: Human informatics and related fields

Basic Section	Examples of related research content
	Perceptual information processing-related
61010	Pattern recognition, Image processing, Computer vision, Visual media processing, Acoustic media processing, Media editing, Media database, Sensing, Sensor fusion, etc.
	Human interface and interaction-related
61020	Human interface, Multi-modal interface, Human-computer interaction, Computer supported cooperative work, Virtual reality, Augmented reality, Realistic communication, Wearable device, Usability, Ergonomics, etc.
	Intelligent informatics-related
61030	Search, Inference, Machine learning, Knowledge acquisition, Intelligent system, Intelligent information processing, Natural language processing, Data mining, Ontology, Agent system, etc.
	Soft computing-related
61040	Neural network, Evolutionary computation, Fuzzy theory, Chaos, Complex systems, Probabilistic information processing, etc.
	Intelligent robotics-related
61050	Intelligent robot, Behavior and environment recognition, Planning, Sensory behavior system, Autonomous system, Digital human, Real world information processing, Physical agents, Intelligent space, etc.
	Kansei informatics-related
61060	Kansei design, Kansei cognitive science, Kansei psychology, Kansei robotics, Kansei measurement evaluation, Kansei interface, Kansei physiology, Kansei material science, Kansei pedagogy, Kansei brain science, etc.
	Design-related
90010	Information design, Environmental design, Industrial design, Spatial design, Design history, Theory of design, Design standard, Design support, Evaluation of design, Design education, etc.

<u>.</u>			Cognitive science-related				
tion		90030	Cognitive science in general, Cognitive models, Kansei, Human factors, Cognitive and brain science,				
(Broad Section J)			Comparative cognition, Cognitive linguistics, Cognitive engineering, etc.				
roac	Medium	n-sized Sect	-sized Section 62: Applied informatics and related fields				
(B	TVICUIUII		Ion 02.73ppined informatics and related fields				
		Basic Section	Examples of related research content				
			Life, health and medical informatics-related				
		62010	Bioinformatics, Life informatics, Biological information, Neuroinformatics, Neural information processing, Molecular computing, DNA computing, Medical information, Health information, Medical image, etc.				
	•		Web informatics and service informatics-related				
		62020	Web system, Social web, Semantic web, Web mining, Social network analysis, Service engineering, Educational service, Medical service, Welfare service, Social service, Information culture, etc.				
			Learning support system-related				
		62030	Media literacy, Learning media, Social media, Learning content, Learning management, Learning support, Remote learning, e-Learning, etc.				
	•		Entertainment and game informatics-related				
		62040	Music information processing, 3D content, Animation, Game programming, Network entertainment, Media art, Digital museum, Experience design, etc.				
	•		Library and information science, humanistic and social informatics-related				
		90020	Library science, Information services, Information organizing, Information retrieval, Information media, Bibliometrics, Information resources, Information ethics, Digital humanities, Social Informatics, Digital archives, etc.				
Broad	Section	K					
Diouu							
	Mediun	n-sized Sect	ion 63: Environmental analyses and evaluation and related fields				
		Basic Section	Examples of related research content				
			Environmental dynamic analysis-related				
		63010	Global warming, Environmental change, Water and material cycle, Polar regions, Chemical oceanography, Biological oceanography, Environmental measurements, Environmental model, Environmental information, Remote sensing, etc.				
	•		Radiation influence-related				
		63020	Radiation, Measurement, Control, Repair, Biological effects, Risk, etc.				
	•		Chemical substance influence on environment-related				
		63030	Toxicology, Toxic substance to human, Trace chemical substance, Endocrine disruptor, Repair, etc.				
	-		Environmental impact assessment-related				
		63040	Atmosphere, Hydrosphere, Terrestrial impact, Impact assessment on human health, Social and economic impacts, Impact assessment on the future generation, Environmental impact assessment, Assessment methods, Monitoring, Simulation, etc.				
	Mediun	n-sized Sect	ion 64: Environmental conservation measure and related fields				
		Basic Section	Examples of related research content				
			Environmental load and risk assessment-related				
		64010	Environmental analysis, Environmental load analysis, Environmental monitoring,				
		0 <del>1</del> 010	Dynamics of environmental pollution, Environmental modelling, Evaluation of contamination, Exposure assessment, Toxicity evaluation, Environmental assessment, Chemical substance management, etc.				

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\( \overline{\pi} \)		Environmental load reduction and remediation-related
tion	64020	Removal of contamination, Treatment of waste material, Control of contamination source, Disposal of waste material,
jec1	64020	Environmental load reduction, Remediation measure of contamination, Noise and vibration reduction,
(Broad Section K)		Countermeasure of ground settlement, Bioremediation, Radioactive decontamination, etc.
(Brc		Environmental materials and recycle technology-related
	64030	Recycle materials, Valuable materials recovery, Separation, refining and purification, Environment-conscious design, Recycle chemistry, Green production, Zero emission, Resource circulation, Renewable energy, Biomass utilization, etc.
		Social-ecological systems-related
	64040	Biodiversity, Conservation biology, Ecosystem services, Natural capital, Impact analysis on ecosystem, Ecosystem management, Ecosystem restoration, Ecological engineering, Regional environmental planning, Impact of climate change, etc.
		Sound material-cycle social systems-related
		Sound material-cycle systems, Material and energy budget analysis, Low carbon society, Unused energy,
	64050	Regional revitalization, Water use system, Industrial symbiosis, Life cycle assessment (LCA),
		Integrated environmental management, 3R (reduction, reuse, recycle) social systems, etc.
		Environmental policy and social systems-related
	(40(0	Environmental philosophy and ethics, Environmental laws, Environmental economics, Environmental information,
	64060	Environmental education, Environmental social activities, Environmental management and governance,
		Consensus forming, Environmental safety and security, Social and public system, Sustainable development, etc.

# (Reference 1) Review Panels and Other Matters

#### 1. Concerning KAKENHI Review

#### **Omitted**

## 2. Review Methods, and Other Matters

The review for Fostering Joint International Research (B) is carried out by the Scientific Research Grant Committee of the Japan Society for the Promotion of Science (JSPS), and it is based on the Research Proposal Document, etc.

The review takes place behind closed doors. The submitted Research Proposal Document is not returned to the applicants.

The details on "assessment rules" (Rules concerning the review and assessment for the Grants-in-Aid for Scientific Research, called "review and assessment rules" below) can be checked on the JSPS website:

(URL: https://www.jsps.go.jp/j-grantsinaid/01 seido/03 shinsa/index.html).

(The "assessment rules" for FY2021 KAKENHI (Fund for the Promotion of Joint International Research (Fostering Joint International Research (B))) will be posted on the JSPS website in the middle of May.)

Furthermore, the review is performed by each Medium-sized Section. Reviewers of 6 to 8 will conduct document reviews in two-stage. The panel reviews will not be conducted. (This is called a "Two-Stage Document Review")

\* In the review process, the reviewers can utilize, as necessary, the "Researchmap" and the database of Grants-in-Aid for Scientific Research (KAKEN). (see page 34)

#### 3. Notification of the Review Results

- 1) JSPS will issue a notification in writing to the research institution on whether the research project has been adopted or not, based on the results of the review. (Planned in early October)
- 2) To Principal Investigators whose proposals have not been adopted and who wish to request for disclosure the results of the review at the first stage of the review, JSPS is ready to disclose the approximate ranking per the Basic Section, the score (average score), and the "standard-format opinion" via the electronic application system. (Planned in the middle of October)

# (Reference 2)

**Procedures on the Handling of Grants-in-Aid for Scientific Research** (Omitted)

# (Reference 3)

Procedures on the Handling of JSPS Grants-in-Aid for Scientific Research (KAKENHI (Multi-year Fund)) (Omitted)

## **Inquiries**

# 1. Inquiries about the invitation of applications should be directed to the following divisions through the research institution.

#### (1) For inquiries concerning the invitation of applications:

Research Aid Planning Division, Research Program Department, Japan Society for the Promotion of Science

Telephone: 03-3263-4927 FAX: 03-3263-9005

\* Available every day except on Saturdays, Sundays, National Holidays, the New Year Holidays (from December 29 until January 3), and the Anniversary of the Foundation of JSPS (September 21).

### (2) For inquiries concerning the use of the KAKENHI electronic application system:

Call center:

Telephone: 0120-556-739 (toll-free)

\* Available from 9:30 to 17:30 every day except Saturdays, Sundays, National Holidays and the New Year Holidays (from December 29 until January 3)

#### The following phone numbers are also available:

Institutional Research and Information Division, Policy Planning Department, Japan Society for the Promotion of Science

Telephone: 03-3263-1017, 1022, 1107, 1024

(3) For inquiries concerning the use of the Cross-ministerial Research and Development management system (e-Rad):

e-Rad help desk:

Telephone: 0570-066-877 (Navi Dial)

- \* Available from 9:00 to 18:00 except on Saturdays, Sundays, National Holidays and the New Year Holidays (from December 29 until January 3)
- \* The following phone numbers are also available: 03-6631-0622

< Important points >

① How to operate e-Rad

Manuals on how to operate e-Rad can be referred or downloaded from the portal site (URL: https://www.e-rad.go.jp). Please agree to the terms of service and apply.

② Time period when e-Rad is available

(Monday to Sunday) 00:00 - 24:00 (in operation 24 hours a day, 365 days a year)

However even during the above-mentioned time period, the operation of e-Rad may be disrupted or suspended, when maintenance and inspection is being carried out. If the operation is scheduled to be disrupted or suspended, this will be announced beforehand on the portal site.

(4) For matters related to the "Self-Assessment Checklist on the Improvement of the

System and Other Matters", based on the "Guidelines on the Management and Audit of Public Research Funds at Research Institutions (Implementation Standards)":

Office of Research Funding Administration, Promotion Policy Division, Research Promotion Bureau, the MEXT

Telephone: 03-5253-4111 (ext. 3827, 3862)

# (5) For matters related to Submission of the "Checklist pertaining to the Current Status" based on "Guidelines for Responding to Misconduct in Research":

Office for Research Integrity Promotion, Human Resources Policy Division, Science and Technology Policy Bureau, MEXT

Telephone: 03-5253-4111 (ext. 3874, 3873, 4028)

#### (6) For matters related to "the National Bioscience Database":

National Bioscience Database Center, Japan Science and Technology Agency (JST) Telephone: 03-5214-8491

#### (7) For matters related to the "Inter-University Bio-Backup Project":

Executive Office, IBBP Center, Inter-University Research Institute Corporation National Institutes of Natural Sciences

Telephone: 0564-59-5930, 5931

#### (8) For matters related to the "National BioResource Project":

Bio-Bank Division, Japan Medical Research and Development Organization Basic Research Division

Telephone: 03-6870-2228

#### (9) For matters related to the "Researchmap":

Service Support Center (in charge of the researchmap), Department of Information Infrastructure, National Institute of Advanced Industrial Science and Technology (JST) Web inquiry form: https://researchmap.jp/public/inquiry/

#### (10) For matters related to the "Security Export Control Policy":

Security Export Control Administration Division, Trade Control Department, Trade and Economic Cooperation Bureau, Ministry of Economy, Trade and Industry

Telephone: 03-3501-2800 FAX: 03-3501-0996

#### 2. The Application Procedures can be viewed on the JSPS website.

Application forms can be downloaded from the following website.

JSPS's website on Grants-in-Aid for Scientific Research

URL: <a href="https://www.jsps.go.jp/j-grantsinaid/35">https://www.jsps.go.jp/j-grantsinaid/35</a> kokusai/04 kyoudoub/download.html

[Japanese]

URL: https://www.jsps.go.jp/english/e-grants/index.html

[English]