(Revised 2025/2/7)

Kobe University's 'Next-Generation AI Outstanding Doctoral Human Development Project based on Collaboration & Co-Creation in Different Fields' Academic Year 2025 Application Guidelines

About Technology Agency (JST)'s Support for Pioneering Research Initiated by the Next Generation AI Human Resource Development Program (BOOST) Program, Kobe University is inviting applications for this project for Kobe University's 'Next-Generation AI Outstanding Doctoral Human Development Project based on Collaboration & Co-Creation in Different Fields'

1. Aim:

The project aims to encourage talented students in various fields to participate in the field of next-generation AI and, as a result, contribute to the layering and multilayering of young researchers who will lead Japan's future science, technology, and innovation, particularly in the field of next-generation AI, We will nurture "Next Generation AI Excellence PhDs" who can contribute to the next generation AI field while utilizing their high level of expertise in other fields.

2. Funding:

Those selected for this project will receive a research incentive grant and a research grant (totaling 3,900,000 yen/year). In addition, to give you the opportunity to improve your research skills, we will provide the support program shown in Sheet 1 as a comprehensive package of support for Kobe University doctoral students.

3. Period:

From April 1, 2025 until course completion (However this funding will not exceed the standard course completion period)

* Depending on the enrollment period and screening results, support may start from October 1, 2025.

4. Number of Nominees:

Maximum of 8 students (maximum of 3 D2 students; however, D2 students may not be selected based on the screening process)

5. Eligible Graduate School:

All graduate schools at Kobe University.

6. Application Requirements:

The applicant must be fallen under all.

1) The applicant will be enrolled as a doctoral student at one of Kobe University's graduate schools as of AY 2025(Including prospects, 1st through 2th year students may apply.).
2) Those who have the ability to promote and lead research in the field of next-generation AI
3) Those who are expected to complete their degree within the standard completion period.
4) The applicant should be affiliated with a laboratory that can manage the project's budget (includes prospective laboratory).
5) Those who have the will and ability to be directly involved in science, technology, and

innovation in the field of next-generation AI in Japan after completing the doctoral program, and whose career path after completion of the program is in line with this.

6) Applicants who have applied to the 2025 Kobe University SPRING or who have applied to the 2024 Kobe University SPRING (including those who have received an advance application offer).

However, students to whom the following applies at the time of application cannot apply:

- Students who have exceeded the standard course completion period.
- MEXT scholarship students (including prospective students), and international students receiving scholarships from your home country.(However, some support may be available under certain conditions, so please contact the contact person for more information.)
- Students who are receiving an income (over 2,400,000yen per year) that meets their living expenses.

7. How to Apply:

1) Application Deadline : 2025/2/27 (Thursday) 12:00(noon)

2) Please complete R7-BOOST Form 1 and convert it to a PDF file, and submit it using the application form.

* An application for SPRING is required to apply for BOOST. Those who have applied for SPRING in the academic year 2024 do not need to apply for SPRING. Students who have not applied for SPRING in the 2024 academic year should fill in the BOOST application form with the receipt number (starting with SC07) sent to you by e-mail after you apply for SPRING in the 2025 academic year.

*The total file size must be less than 2 MB when sent.

*You can write your answers to sections 2 ~ 4 of Form 1 in English

*Obtain approval to apply from your supervisor.

*If you do not receive an email receipt after submission, please contact the contact person.

*If you are unable to submit an application using the application form, please contact the contact person.

Application Form:
https://forms.gle/u153ycfbAuQSeQk37

8. Selection Process:

- Candidates will be chosen by the project's steering committee.
- Selections will be made by judging how well the information submitted in R7-BOOST Form 1 corresponds to the review criteria on Sheet 2.
- Interviews will be carried out as required during the selection process.
- Selection results are due to be published on the Career Center homepage by around early April 2025.

9. Recipient's responsibilities:

1) Submit a research progress report every year

For the year in which you complete your doctorate, you may use your degree thesis as the report.

2) Participate in the Core C^3 Research Progress Management Program (held approximately twice a year) or the Cross-disciplinary C^3 Research Progress Management Program (held

approximately twice a year)

3) The recipients are required to actively participate in the doctoral student support package programs (Sheet 1) and participate in the program equivalent to 4 credits of lessons (1 credit is 45 hours of study) by the end of the second year. However, the programs offered in this package may not be regular courses with credits.

4) Actively disseminate the research results via academic papers and/or academic conference presentations.

5) Attend events specified by the steering committee.

6) Respond to various surveys, such as follow-up survey on your career 10 years after graduating.

*Please be aware that credit numbers and course names mentioned in this document are subject to change.

10. Disqualification, suspension or return from funding:

Project student status may be disqualified, suspended or returned if any of the following conditions are met.

1) The application requirements have not been met.

2) The execution of the research plan, or the funded student's performance of their duties is deemed to be unsatisfactory.

3) The applicant submits a withdrawal notice.

4) The university president or the project director or the project's steering committee determines that there is cause for disqualification or suspension.

11. Precautions:

・A final income tax return where research support funds are taxed as miscellaneous income is required.

・Recipients are permitted to earn remuneration from teaching assistant/part-time job positions, internships or prizes from academic societies, as long as these do not hinder their research activities.

・Your name will be published on the University homepage if your project is selected.

12. Inquiries:

Kobe University Main Office for Doctoral Student Support TEL: 078-803-5217

Email Address : crct-hakase@edu.kobe-u.ac.jp

(Revised 2025/2/7)

(Sheet 1)

Next-Generation AI Outstanding Doctoral Human Development Project based on Collaboration & Co-Creation in Different Fields Comprehensive Support Package for Kobe University PhD students

A. Mid- to Long-term Internship Program
B. Mathematics/Data Science Education Program
C. Career Support Program for PhD

(Revised 2025/2/7)

(Sheet 2)

Next-Generation AI Outstanding Doctoral Human Development Project
based on Collaboration & Co-Creation in Different Fields
Review criteria and contents

Common screening items with the project for fostering the Next-Generation Outstanding Doctoral Human Development Project based on Co-creation in Different Fields

Review criteria	Contents
Research Achievements	Do the applicant's research achievements show future potential?
Positioning of Research	Does the applicant explain the background behind their chosen research theme, and is the idea outstanding?
Research aim/contents	Are the research aim, methodology and contents clearly indicated? Does the research method show originality and does the applicant indicate how they will develop their research topic?
Research Competency	Are the applicant's 'strengths in relation to research' and 'factors considered necessary for further development' concretely explained, and are they able to sufficiently self-analyzed their own research performance? In addition, do they fully expect to become an outstanding researcher who bears responsibility for the future of academia?
Mathematics/Data Science	Does the applicant have a strong desire to acquire data science training?
Development into multidisciplinary co-creation research	Does the research plan or future plan contain aspects that are expected to be developed into multidisciplinary co-creation research?
Development of challenging research	Does the research plan or future plan contain aspects that are expected to be developed into pioneering/challenging research?
Development of new research fields	Is the applicant not only eager to contribute towards the development of their current specialized field but also to break into and develop new research fields?
Capacity to resolve social issues	Has the applicant paid attention to social issues? Have they acquired the skills via their doctoral research to contribute towards resolving these issues? How to contribute to science, technology and innovation in Japan in the future.
Future Plan	How to contribute to science, technology and innovation in Japan in the future

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Review criteria	Contents
Positioning of AI Research	Is the background leading to the establishment of the AI research problem presented and is the conception of the problem excellent?
Purpose and Contents of AI Research, etc.	Are the objectives, research methods, and research content of the AI research specific and beyond the level of simply using general AI technology?
Next Generation AI Research Competency	Do you have the competencies to promote and lead research in the field of next-generation AI?
Contribution to next-generation AI research	How to contribute to science, technology and innovation in the field of next-generation AI in Japan in the future

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(Sheet 3)

Mathematics/Data Science Education Program

Students are required to take at least 2 credits from among the programs scheduled to be offered mainly by the University's Center for Mathematical and Data Sciences. For your reference, the programs offered in 2024 are listed below. Depending on the graduate school, some of these programs may not be regular credit courses.

Course Title	credit	Contents
Advanced Data Science 1	1	In Advanced Data Science 1, students learn about the technical aspects of artificial intelligence and machine learning, which are the foundation of data science. In Advanced Data Science 2, problem-solving workshops are held on the practical applications of data science based on case reports from companies on the user side of artificial intelligence technology and companies that provide technology (companies on the seed side).
Advanced Data Science 2	1	
Exercise in Practical Data Science, A	1	Learn data analysis methods and acquire basic knowledge to solve problems. Also, learn how to operate the system through hands-on exercises using actual data.
Exercise in Practical Data Science, B	1	PBL (Project Based Learning) through group work, in which data that may be relevant to actual issues is provided by the local government, with the aim of setting and solving issues through data analysis and analysis.
PBL Exercises in Data Science (contest type)	1	Practical learning of how to handle data, classification and regression problems using Python through PBL (Project Based Learning) exercises modeled after data science competitions.
JRI-Kobe Open innovation Workshop Financial Business and Information System Engineering	1	Through PBL (Project Based Learning) group work, students will learn how the basic technologies of information systems engineering, such as algorithms, data structures, cyber security, information communication networks, and artificial intelligence, are used in actual financial businesses and how they are deeply related to each other.
Theory of Stochastic Processes	2	Students will understand the rudiments of stochastic analysis based on Brownian motion. Students will also be exposed to Black-Sholes theory, which has applications in financial engineering. *Advanced knowledge of mathematics is required as the level is quite high.
Topics in Applied Mathematics 3a	1	Learn the basic concepts of various statistical methods and how they are used in real life.
Topics in Applied Mathematics 3b	1	