For students enrolled in FY 2021

Graduate School of Frontier Science Initiative
Kanazawa University
Division of Transdisciplinary Sciences
(Master's / Doctoral Program)

Guidebook

The English texts are for complementary use only.
English expressions do not change the Japanese content.

GRAFINITI
新学術創成研究科

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I Educational Philosophy, Mission, and Graduates fostered by the Division of Transdisciplinary Sciences

Both Kanazawa University (hereafter “KU”) and the Japan Advanced Institute of Science and Technology (hereafter “JAIST”) aim to produce doctoral graduates (hereafter, “Science, Technology, and Innovation Graduates”) who can create the infrastructure for science, technology and innovation, in accordance with global needs and trends; for their application to solve societal challenges, with original ideas and research excellence. For this reason, the Division of Transdisciplinary Science seeks to establish the Graduate School of Frontier Science Initiative at KU, and the Graduate School of Advanced Science and Technology at JAIST, respectively, (hereafter this “Division) with an inter-university curriculum.

Educational Philosophy and Mission

In the development of Science, Technology, and Innovation Graduates, both universities defined the source of innovation as “the creation of new knowledge” and set forth the “Promotion of Transdisciplinary Sciences” as a unified and coherent educational philosophy for its realization.

We define the “Promotion of Transdisciplinary Sciences” as “promoting the integration of multiple scientific fields through pursuing and implementing the “Methodology of Science Integration,” under a framework that goes beyond existing scientific fields, to solve complex social problems through approaches with a 'science, technology, and innovation' orientation.” In line with this vision, we shall undertake the construction of an education system.

The Three Frameworks for Challenging Innovations (The Three Challenges)

As a framework to realize our educational philosophy, this Division will comprise only one division and will not provide courses. On the other hand, as a framework for going beyond existing scientific fields to solve complex societal issues, we have combined both universities’ strengths and specializations and set forth the below three frameworks for challenging innovations (Three Challenges).

I: Life Innovation (creation of healthy, high-quality lifestyles)

Keywords

Measurement, elucidation, and control of biological and physiological functions that contribute to the healthy lifestyles of individuals and their application

II: Green Innovation (creation of next-generation materials, devices, and energy, adapted to the environment)

Keywords

Creation, storage, and transmission of natural and renewable energy, and the development of energy-saving devices utilizing advanced materials and nanotechnology.

III: Systems Innovation (creation of a future where science and technology exist in harmony with humans and society)

Keywords

Development of intelligent systems that utilize big data and AI, development of machines and systems inspired by living organisms, improvement of social environment based on that takes into account the natural and cultural environment

Four Initiative (The Four Forces)

Our Division aspires to pursue the integration of scientific methods by encouraging students to delve into arenas beyond their research field to seize initiative by intellectual interaction with those of a different scholarly background. Although uniformly defining this “force” is difficult, we have defined the below Four Forces as an underlying structure.

Force 1: The “Force” for Data analysis

The “Force” to multilaterally analyze data that represent phenomena from the perspective of each integrated scientific field

Force 2: The “Force” for Modeling

The “Force” to advocate for modeling that is not in conflict with the fundamentals of the transdisciplinary fields

Force 3: The “Force” for Visualization

The “Force” to present a picture that is easy for people in other fields to understand

Force 4: The “Force” for Designing

The “Force” to solve problems while altering your proposals through interactions with other fields and society

Accordingly, students in this Division choose one of the three frameworks for challenging innovations (Three Challenges), systematically take the curriculum in line with their chosen framework, and receive guidance from several research advisers. Also, while actively interacting with a variety of other people, including academic staff, other students, and people from corporations, students will pursue and implement the “Methodology of Science Integration,” based on the Four Forces, create new ideas from different insights and perspectives, and advance the research themes they set. In addition, through students acquiring the competencies listed in the diploma policy, this Division will be able to develop the “Science, Technology, and Infrastructure Graduates” that it aims to achieve.

Master’s Program

Type of Graduates Fostered

Graduates who sense the needs and trends of global society and who can concertedly and collaboratively contribute to scientific and technological innovation, based on advanced science and technology and a variety of scientific knowledge.

Diploma Policy

In the Master’s Level Section of the Integrated Course, after pursuing and implementing the “Methodology of Science Integration” based on the Four Forces outlined in the educational philosophy, students who meet the following requirements will be awarded a master’s degree in transdisciplinary science: have acquired the five competencies listed in the below learning outcomes; have been enrolled for a predetermined period; have earned the predefined credits; have passed the master’s thesis screening and final test: have passed screening and final test of research results on a specific theme, or have passed the Qualifying Examination.

1. The ability to contribute to the solution of societal issues related to science, technology, and innovation.
2. Practical abilities and knowledge regarding your specialization
3. Willingness and ability to actively engage with other fields
4. The ability to understand foreign-language academic articles and to give a simple explanation of your research in a foreign language
5. Research ethics in regard to science, technology, and life

Curriculum Policy

In this Division, under the framework of the Three Challenges outlined in the educational philosophy, we will focus on problem-solving-oriented methods and educational programs to achieve the learning outcomes given in the Diploma Policy,

and we have compiled a systematic curriculum based on the qualities that students should acquire through taking the educational program. Specifically, the following subjects will be structured and arranged systematically to form the curriculum.

1. Systematic Specialized Subjects and Research Support Courses to acquire and utilize basic knowledge of your specialization.
2. Transdisciplinary Experience Courses centered around transdisciplinary studies that include research in other fiel ds, transdisciplinary seminars, and group work.
3. Social Implementation Courses for practical education that takes into account the needs of society
4. Core Courses common across all subjects that foster fundamental knowledge and attitudes related to the creatio n of innovation

Doctoral Program

Type of Graduates Fostered

Doctoral graduates who, in accordance with the needs and trends of global society, can create the infrastructure for science, technology, and innovation and apply and develop this to solve social issues based on original ideas and exceptional research capabilities.

Diploma Policy

In the Doctoral Level Section of Integrated Course, after pursuing and implementing the “Methodology of Science Integration” based on the Four Forces outlined in the educational philosophy, students who meet the following requirements will be awarded a doctoral degree in transdisciplinary science: have been enrolled for a predetermined period; have earned the predefined credits; have passed the doctoral thesis screening and final test have acquired 1) to 5) along with 6) of the below competencies. Conversely, students who acquire 1) to 5) along with 7), will be awarded a doctoral degree in science or engineering depending on their field.

1) The ability to independently discover, organize, and then solve societal issues related to science, technology, and innovation

2) Sophisticated practical abilities and knowledge regarding your specialization

3) The ability to apply expertise and technology of other fields in your specialization

4) The ability to present and discuss research outcomes in a foreign language at international conferences and international joint research projects.

5) To have pragmatic research ethics regarding science, technology, and life.

6) The ability to create new knowledge by integrating your specialization with other fields

7) The ability to create new knowledge with a focus on your specialization

Curriculum Policy

In this Division, under the framework of the Three Challenges outlined in the educational philosophy, we will focus on problem-solving-oriented methods and educational programs to achieve the learning outcomes given in the Diploma Policy, and we have formulated a systematic curriculum based on the qualities that students should be able to acquire through taking the educational program. Specifically, the following subject groups will be structured and arranged systematically to form the curriculum.

Doctoral Level Section of the Integrated Course

1) Systematic Specialized Subjects and Research Support Courses to develop knowledge of your specialization

2) Transdisciplinary Experience Courses centered around transdisciplinary studies that include research in other fields, transdisciplinary seminars, and group work.

3) Social Implementation Courses for practical education based on the needs of society

4) Subjects such as internships and research projects abroad that develop an international awareness

II List of Academic Supervisors

[Kanazawa University]

Please refer to the faculty members' introduction page of the Division of Transdisciplinary Sciences.

https://gsinfiniti.w3.kanazawa-u.ac.jp/kyoudou/faculty/

[Japan Advanced Institute of Science and Technology (JAIST)]

Please refer to the faculty members introduction page of the Division of Transdisciplinary Sciences.

https://gsinfiniti.w3.kanazawa-u.ac.jp/kyoudou/faculty/

III FY 2021 Academic Calendar

Kanazawa University

1st Quarter & 2nd Quarter

Week/ Month	Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.	
4	28	29	①	②		③	3	
	4	5	6	7	8	9	10	Q1
	11	12	13	14	15	16	17	
	18	19	20	21	22	23	24	
5	25	26	27	28	29	30	1	
	2	3	4	5	6	7	8	
	9	10	11	12	13	14	15	
	16	17	18	19	20	21	22	
	23	24	25	26	27	28	29	
6	30	31	1	2	3	④	5	
	6	④			10	11	12	Q2
	13	14	15	16	17	18	19	
	20	21	22	23	24	25	26	
7	27	28	29	30	1	2	3	
	4	5	6	7	8	9	10	
	11	12	13	14	15	16	17	
	18	19	20	21	22	23	24	
	25	26	27	28	29	30	31	
8	1	2	3	4	5	6	7	
	8	9	10	11	12	13	14	
	15	16	17	18	19	20	21	
	22	23	24	25	26	27	28	
9	29	30	31	1	2	3	4	
	5	6	7	8	9	10	11	
	12	13	14	15	16	17	18	
	19	20	21	22	23	24	25	
	26	⑤	28	29	30			
Class*		7.5	7.5	7.5	7.5	7.5	times	
Exam*		0.5	0.5	0.5	0.5	0.5	times	

3rd Quarter & 4th Quarter

Week/ Month	Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.	
10	26	27	28	29	30	⑥	2	Q3
	3	4	5	6	7	8	9	
	10	11	12	13	14	15	16	
	17	18	19	20	21	22	23	
	24	25	26	27	28	Preparations	KU Festival	
11	KU Festival	Clean up	2	3	4	5	6	
	7	8	9	10	11	12	13	
	14	15	16	17	18	19	20	
	21	22	23	24	25	26	27	
12	28	29	30	1	2	3	4	
	5	6	7	8	9	10	11	Q4
	12	13	14	15	16	17	18	
	19	20	21	22	23	24	25	
1	26	27	28	29	30	31	1	
	2	3	4	5	Mon.	7	8	
	9	10	11	Fri.	13	Preparations	Common test	
	Common test	17	18	19	20	21	22	
	23	24	25	26	27	28	29	
2	30	31	1	2	3	4	5	
	6	7	8	9	10	11	12	
	13	TOEIC-IP		16	17	18	19	
	20	21	22	23	24	⑦		
3	27	28	1	2	3	4	5	
	6	7	8	9	10	11	12	
	13	14	15	16	17	18	19	
	20	21	⑧	23	24	25	26	
	27	28	29	30	31			
Class*		7.5	7.5	7.5	7.5	7.5	times	
Exam*		0.5	0.5	0.5	0.5	0.5	times	

Classes　Exams　Holidays　Seasonal Vacations　No Classes Day **

①Registration Guidance
②Orientation for College Students
③Entrance Ceremony (For Degree students)
＃1st Quarter classes start　Apr.5
Spring Campus Visit　May 30
University Founding Day　May 31
Q1 Make-up Classes Week / 6th period on May 14-27
④Health Check for New Coming College Students
＃2nd Quarter classes start　June 10
Q2 Make-up Classes Week / 6th period on July 15-30
Summer Campus Visit　Aug.3 -16
Autum Campus Visit　Sep.18-19
⑤Commencement Ceremony

⑥Entrance Ceremony (For Degree students)
＃3rd Quarter classes start　Oct.1
Kanazawa University Festival　Oct.30-31
Preparations and clean-up for KU Festival Oct.29/Nov.1

Q3 Make-up Classes Week / 6th period on Nov.9,11-24
＃4th Quarter classes start　Dec.8
Conduct Classes for Monday　Jan.6
Conduct Classes for Friday　Jan.12
Preparations date for Common Test　Jan.14
Common test for University Admissions　Jan.15-16
Q4 Make-up Classes Week / 6th period on Jan.21-Feb.3
TOEIC-IP(First Year College Student)　Feb.14-15
⑦KU Admission Examination
⑧Commencement Ceremony

* Class and Exam totals are per quarter.

** There may be supplementary or intensive lectures

JAIST

令和３年度 2021-2022　　試験期間 Examination Term

４月 April

日 Sun	月 Mon	火 Tue	水 Wed	木 Thu	金 Fri	土 Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

５月 May

日 Sun	月 Mon	火 Tue	水 Wed	木 Thu	金 Fri	土 Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

６月 June

日 Sun	月 Mon	火 Tue	水 Wed	木 Thu	金 Fri	土 Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

７月 July

日 Sun	月 Mon	火 Tue	水 Wed	木 Thu	金 Fri	土 Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

８月 August

日 Sun	月 Mon	火 Tue	水 Wed	木 Thu	金 Fri	土 Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

９月 September

日 Sun	月 Mon	火 Tue	水 Wed	木 Thu	金 Fri	土 Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

1の1期 Term1-1

1の2期 Term1-2

１０月 October

日 Sun	月 Mon	火 Tue	水 Wed	木 Thu	金 Fri	土 Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

１１月 November

日 Sun	月 Mon	火 Tue	水 Wed	木 Thu	金 Fri	土 Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

１２月 December

日 Sun	月 Mon	火 Tue	水 Wed	木 Thu	金 Fri	土 Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

１月 January

日 Sun	月 Mon	火 Tue	水 Wed	木 Thu	金 Fri	土 Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

２月 February

日 Sun	月 Mon	火 Tue	水 Wed	木 Thu	金 Fri	土 Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

３月 March

日 Sun	月 Mon	火 Tue	水 Wed	木 Thu	金 Fri	土 Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

2の1期 Term2-1

2の2期 Term2-2

※　7月19日（月）は、講義回数調整のため、木曜日の講義を行う。
　　July 19 follows the Thursday schedule.
※　1月 6日（木）は、講義回数調整のため、火曜日の講義を行う。
　　January 6 follows the Tuesday schedule.
※　1月 7日（金）は、講義回数調整のため、月曜日の講義を行う。
　　January 7 follows the Monday schedule.
※　1月12日（水）は、講義回数調整のため、月曜日の講義を行う。
　　January 12 follows the Monday schedule.

IV [Master's Program] Course Outline

1 List of Subjects (for KU and JAIST)

Category		Subject Name	University	Year	Credit(s)		Completion Requirements
					Compulsory	Elective	
Core Courses		Research Ethics *1	KU	1		1	At least four credits must be earned from Core Courses. KU Students must take *1 subjects. At least two credits must be earned from *2 subjects.
		Entrepreneurial Core Technology and Strategy	KU	1		1	
		Introduction to Entrepreneurship	KU	1		1	
		Innovation Theory and Methodology for Social Competencies	JAIST	1		1	
		Innovation Theory and Methodology for Creativity	JAIST	1		1	
		Introduction to Practical Data Analysis and Statistics a *2	KU	1		1	
		Introduction to Practical Data Analysis and Statistics b *2	KU	1		1	
		Statistics for Data Analytics *2	JAIST	1		2	
Transdisciplinary Experience Courses		Transdisciplinary Session I *3	Joint	1	2		At least four credits, including compulsory subjects, must be earned from Transdisciplinary Experience Courses and Social Implementation Courses. For *3 subjects, one credit is from KU and 1 from JAIST, for a total of two credits. KU students must earn at least 1 credit from *4 subjects. KU students must earn at least 1 credit from *5 subjects.
		Transdisciplinary Laboratory Rotation I a (KU)	KU	1		1	
		Transdisciplinary Laboratory Rotation I b (KU)	KU	1		1	
		Transdisciplinary Laboratory Rotation I a (JAIST) *4	JAIST	1		1	
		Transdisciplinary Laboratory Rotation I b (JAIST) *4	JAIST	1		1	
Social Implementation Courses		Internship a(KU) *5	KU	1		1	
		Internship b(KU) *5	KU	1		2	
		Internship a(JAIST) # cannot be taken	JAIST	1		1	
		Internship b(JAIST) # cannot be taken	JAIST	1		2	
		Off-Campus Research Training a(KU) *5	KU	1		1	
		Off-Campus Research Training b(KU) *5	KU	1		2	
		Off-Campus Research Training a(JAIST) # cannot be taken	JAIST	1		1	
		Off-Campus Research Training b(JAIST) # cannot be taken	JAIST	1		2	
Specialized Courses	Common Subjects	Distributed Parallel Real-Time Systems a	KU	1,2		1	Students must take subjects from two categories or more of the following categories: Common Subjects, Life Science Subjects, Materials Science Subjects, and Social Systems Science Subjects. Students who take *7 or *8 subjects must earn at least ten credits from Specialized Subjects. Students who take *9 subjects must earn at least twelve credits from Specialized Subjects.
		Distributed Parallel Real-Time Systems b	KU	1,2		1	
		Data Mining a	KU	1,2		1	
		Data Mining b	KU	1,2		1	
		Bioinformatics and Recent Advances in Biology	KU	1,2		2	
		Information Processing in Video Systems a	KU	1,2		1	
		Information Processing in Video Systems b	KU	1,2		1	
		Array Signal Processing a	KU	1,2		1	
		Array Signal Processing b	KU	1,2		1	
		Satellite Navigation Engineering a	KU	1,2		1	
		Satellite Navigation Engineering b	KU	1,2		1	
		Advanced Communication Engineering a	KU	1,2		1	
		Advanced Communication Engineering b	KU	1,2		1	
		Fundamentals of Nanoscale Measurements and Control A	KU	1,2		1	
		Fundamentals of Nanoscale Measurements and Control B	KU	1,2		1	
		Introduction to Experimental Philosophy	JAIST	1,2		2	
		Introduction to Cognitive Science	JAIST	1,2		2	
		Basis of Data Analytics	JAIST	1,2		2	
		Data Analytics	JAIST	1,2		2	
		Theory on Creative Process in Design	JAIST	1,2		2	
		Algorithms and Data Structures	JAIST	1,2		2	
		Fundamentals of Programming	JAIST	1,2		2	
		Algebra for Computer Scientist	JAIST	1,2		2	
		Mathematical Logic	JAIST	1,2		2	
		Analysis for Information Science	JAIST	1,2		2	
		Formal Languages and Automata	JAIST	1,2		2	
		Computation Theory	JAIST	1,2		2	
		Image Information Science	JAIST	1,2		2	
		Modeling of Dynamics	JAIST	1,2		2	
		Bioscience of Cancer I a	KU	1,2		1	

Category		Subject Name	University	Year	Credit(s)		Completion Requirements
					Compulsory	Elective	
Specialized Courses	Life Science Subjects	Bioscience of Cancer I b	KU	1,2		1	
		Bioscience of Cancer II a	KU	1,2		1	
		Bioscience of Cancer II b	KU	1,2		1	
		Introduction to Dynamics of Biomolecules a	KU	1,2		1	
		Introduction to Dynamics of Biomolecules b	KU	1,2		1	
		Introduction to Molecular and Biophysics a	KU	1,2		1	
		Introduction to Molecular and Biophysics b	KU	1,2		1	
		Management of Opportunis ic Infection Affecting Tissue Viabi ity of Human Skin and Mucosa of Oral Cavity or Pharynx a	KU	1,2		1	
		Management of Opportunis ic Infection Affecting Tissue Viabi ity of Human Skin and Mucosa of Oral Cavity or Pharynx b	KU	1,2		1	
		Introduction to Discovering Molecular Probes a	KU	1,2		1	
		Introduction to Discovering Molecular Probes b	KU	1,2		1	
		Human Body: Structures a	KU	1,2		1	
		Human Body: Structures b	KU	1,2		1	
		Human Body: Functions	KU	1,2		2	
		Human Body: Diseases	KU	1,2		2	
		Advanced Course of Organic Chemistry	KU	1･2		1	
		Introduction to Bioscience	JAIST	1,2		2	
		Bioorganic Chemistry	JAIST	1,2		2	
		Biophysics and Biophysical Chemistry	JAIST	1,2		2	
		Functional Biomolecules	JAIST	1,2		2	
		Biomaterial Sensing	JAIST	1,2		2	
		Medical Biomaterials	JAIST	1,2		2	
	Materials Science Subjects	Lightwave Engineering a	KU	1,2		1	
		Lightwave Engineering b	KU	1,2		1	
		Introduction of Energy and Environmental Program	KU	1,2		1	
		Introduction of Material Program	KU	1,2		1	
		Advanced Study of Solar Cell Technology I	KU	1,2		2	
		Advanced Solid State Physical Chemistry I a	KU	1,2		1	
		Advanced Solid State Physical Chemistry I b	KU	1,2		1	
		Synthetic Chemistry of Polymeric Materials	KU	1,2		2	
		Functional Polymer Materials	KU	1,2		2	
		Advanced Bio-Refinery Engineering I a	KU	1,2		1	
		Advanced Bio-Refinery Engineering I b	KU	1,2		1	
		Advanced Surface and Interface Engineering I a	KU	1,2		1	
		Advanced Surface and Interface Engineering I b	KU	1,2		1	
		Devices Process Engineering a	KU	1,2		1	
		Devices Process Engineering b	KU	1,2		1	
		Fundamentals of Materials Characterization a	KU	1,2		1	
		Fundamentals of Materials Characterization b	KU	1,2		1	
		Introduction to Physics	JAIST	1,2		2	
		Introduction to Chemistry	JAIST	1,2		2	
		Quantum Mechanics	JAIST	1,2		2	
		Statistical Mechanics	JAIST	1,2		2	
		Electromagnetic Theory	JAIST	1,2		2	
		Organic Chemistry	JAIST	1,2		2	
		Computational Material Design	JAIST	1,2		2	
		Properties of Organic Materials	JAIST	1,2		2	
		Inorganic Materials Chemistry	JAIST	1,2		2	
		Instrumental Analytical Chemistry	JAIST	1,2		2	
		Solid State Physics I	JAIST	1,2		2	
		Mathematics for Condensed Matter Science and Technology	JAIST	1,2		2	
		Chemistry of Catalyst and Catalysis	JAIST	1,2		2	
		Polymer Chemistry I	JAIST	1,2		2	

Category		Subject Name	University	Year	Credit(s)		Completion Requirements
					Compulsory	Elective	
Specialized Courses		Mechatronics	JAIST	1,2		2	
		Device Physics	JAIST	1,2		2	
		Solid State Physics II	JAIST	1,2		2	
	Social Systems Science Subjects	Science in Archaeology a	KU	1,2		1	
		Science in Archaeology b	KU	1,2		1	
		Elementary Theories of Transdisciplinary Science on Cognition and Behavior a	KU	1,2		1	
		Elementary Theories of Transdisciplinary Science on Cognition and Behavior b	KU	1,2		1	
		Introduction to Comparative Cognition a	KU	1,2		1	
		Introduction to Comparative Cognition b	KU	1,2		1	
		Introduction of Exercise Physiology a	KU	1,2		1	
		Introduction of Exercise Physiology b	KU	1,2		1	
		Special Lecture on Civilization Studies a	KU	1,2		1	
		Special Lecture on Civilization Studies b	KU	1,2		1	
		Clinical Neuropsychology I a	KU	1,2		1	
		Clinical Neuropsychology I b	KU	1,2		1	
		Introduction to Cultural Resource Studies a	KU	1,2		1	
		Introduction to Cultural Resource Studies b	KU	1,2		1	
		Intelligent Mobile Robot I a	KU	1,2		1	
		Intelligent Mobile Robot I b	KU	1,2		1	
		Biomechanical Engineering I a	KU	1,2		1	
		Biomechanical Engineering I b	KU	1,2		1	
		History of Technology and Society	KU	1,2		1	
		Computer Vision A	KU	1,2		1	
		Computer Vision B	KU	1,2		1	
		Methodology for the Social Sciences	JAIST	1,2		2	
		Methodology for Knowledge Media	JAIST	1,2		2	
		Network Science	JAIST	1,2		2	
		Media Creation	JAIST	1,2		2	
		Management of Innovation	JAIST	1,2		2	
		Service Management	JAIST	1,2		2	
		Discrete Signal Processing	JAIST	1,2		2	
		System Optimization	JAIST	1,2		2	
		Computer Architecture	JAIST	1,2		2	
		Software Design Methodology	JAIST	1,2		2	
		Natural Language Processing I	JAIST	1,2		2	
		Statistical Signal Processing	JAIST	1,2		2	
		Operating Systems	JAIST	1,2		2	
		Game Informatics	JAIST	1,2		2	
		Pattern Analysis and Recognition	JAIST	1,2		2	
		Foundation of Software Verification	JAIST	1,2		2	
Research Support Courses		Seminar and Exercise I (KU) # cannot be taken	KU	1, 2		2	KU Students must take *6 subjects. KU students who will compile their research as a master's thesis must take *7 subjects and earn at least eight credits from Research Support Courses. KU students who will compile their research as a research project must take *8 subjects and earn at least four credits from Research Support Courses. KU students who will compile their research as a doctoral research plan must take *9 subjects and earn at least four credits from Research Support Courses.
		Seminar and Exercise I (JAIST) *6	JAIST	1, 2		2	
		Master Thesis Report I (KU) *7	KU	1, 2		6	
		Master Thesis Report I (JAIST) # cannot be taken	JAIST	1, 2		6	
		Research Project (KU) *8	KU	1, 2		2	
		Research Project (JAIST) # cannot be taken	JAIST	1, 2		2	
		Research Planning for Ph.D. Course (KU) *9	KU	1, 2		2	
		Research Planning for Ph.D. Course (JAIST) # cannot be taken	JAIST	1, 2		2	

Students who will compile their research in a master's thesis or as a research project must earn at least 32 credits, and students who choose QE must earn at least 34 credits.

Students must obtain at least ten credits from subjects held at JAIST.

KU students cannot take subjects marked #.

2 Semesters and Class Time

The semesters, class schedules, and class time for KU and JAIST are shown in Appendix 1.

Classes held at KU will be 90 minutes, once a week. However, please be aware that there are some exceptions that are held twice a week or by semester. 1-credit quarter subjects will be concluded in eight weeks.

Classes held at JAIST will be 100 minutes, twice a week. These are generally comprised of 2-credit quarter subjects (1-1 quarter, 1-2 quarter, 2-1 quarter, or 2-2 quarter) and will conclude in eight weeks. Please refer to the syllabus for details on each subject.

Further, the combination of bi-weekly JAIST classes will be as shown in Appendix 2.

Appendix 1

Category	Semester	Class time
KU	First semester { First quarter (eight weeks) / Second quarter (eight weeks) Second semester { Third quarter (eight weeks) / Fourth quarter (eight weeks) *There will be a period for regular examinations after the end of each class period.	First Period 08:45 - 10:15 Second Period 10:30 - 12:00 Third Period 13:00 - 14:30 Fourth Period 14:45 - 16:15 Fifth Period 16:30 - 18:00 Sixth Period 18:15 - 19:45
JAIST	First semester: 1-1 quarter 1-2 quarter (eight weeks each) Summer intensive lectures (August, September) Second semester: 2-1 quarter, 2-2 quarter (eight weeks each) Winter intensive lectures (February, March) *There will be a period for regular examinations after the end of each class period. For intensive lectures, as a general rule, regular examinations are held after each class.	First period 9:00 - 10:40 Second period 10:50 - 12:30 Third period 13:30 - 15:10 (Tutorial hour) Fourth period 15:20 - 17:00 Fifth period 17:10 - 18:50 ※The tutorial hour is time for a make-up class, supplementary learning, or answering questions and consultations from students regarding the first-period lesson. Depending on the subject, if you do not attend, you may not be able to earn credits, so please follow the directions of the instructor in charge. Please note that there is no tutorial hour for fourth-period classes on Tuesdays and Thursdays.

Appendix 2

	Monday	Tuesday	Wednesday	Thursday	Friday
1	Monday first period class	Tuesday first period class	Wednesday first period class	Tuesday second period class	Monday second period class
2	Monday second period class	Tuesday second period class	Monday first period class	Tuesday first period class	Wednesday first period class
3	First period tutorial hour				
4		Tuesday fourth period class		Tuesday fourth period class	
5					

3 Class Subject Structure and Categories; Credit Requirements

3.1 Core Courses

From the first until the third quarter of the first year, the below subjects will be held, and they will be core requirement subjects. Please note that KU students must take Research Ethics (at KU). By taking these courses, students will cultivate the basic knowledge that will form the foundation to work on research into solving complex societal issues related to science, technology, and innovation.

(The numbers inside the {} below indicate the number of credits.)

Research Ethics (at KU) {1}

Entrepreneurial Core Technology and Strategy (at KU) {1}

Introduction to Entrepreneurship (at KU) {1}

Innovation Theory and Methodology for Social Competencies (at JAIST) {1}

Innovation Theory and Methodology for Creativity (at JAIST) {1}

Also, from the first until the second quarter of the first year, Introduction to Practical Data Analysis and Statistics a (at KU), Introduction to Practical Data Analysis and Statistics b (at KU), and Statistics for Data Analytics (at JAIST) will be held. They are required subjects (students must take one of the subjects held at KU or JAIST) for the first year. Of the Four Forces that form the "Methodology of Science Integration" basis, this subject is positioned to cultivate Force 1: The "Force" for Data analysis and Force 3: The "Force" for Visualization.

Credit requirements for Core Courses

*Meet the below requirements simultaneously and earn four or more credits from this subject category.

(1) KU students must earn one credit from Research Ethics (at KU)

(2) Must earn at least one credit from the below subjects

Entrepreneurial Core Technology and Strategy (at KU) {1}

Introduction to Entrepreneurship (at KU) {1}

Innovation Theory and Methodology for Social Competencies (at JAIST) {1}

Innovation Theory and Methodology for Creativity (at JAIST) {1}

(3) To earn at least two credits from the below subjects

Introduction to Practical Data Analysis and Statistics a (at KU) {1}

Introduction to Practical Data Analysis and Statistics b (at KU) {1}

Statistics for Data Analytics (at JAIST) {2}

3.2 Transdisciplinary Experience Courses

Transdisciplinary Session I {2} held in the first year, Transdisciplinary Laboratory Rotation I a {1}, and Transdisciplinary Laboratory Rotation I b {1} held from the third quarter to the fourth quarter of the first year, will be held at both universities and will be partner university required subjects.

Transdisciplinary Session I will take the format of a joint class at both universities. There will be an introduction of research by all academic staff at both universities, an introduction of joint research between students, and participation in the interim master's thesis presentations of second-year students. Through this, students will be able to incorporate expertise and methodology of different disciplines regardless of their current academic discipline or field of research. They will enhance their understanding of the positioning and meaning of their research theme. Of the Four Forces that form the "Methodology of Science Integration" basis, this subject is positioned to foster Force 2: The "Force" for Modeling.

In Transdisciplinary Laboratory Rotation I a and Transdisciplinary Laboratory Rotation I b, students will spend about 40 hours in a laboratory that differs from their specialization and conduct experimental and theoretical research. Along with this,

students will learn firsthand the research methods and concepts of other fields while acquiring wide-ranging knowledge and skills that exceed the boundaries of their specialization. Through the above, students will acquire new ideas from these different insights and perspectives. Students will also pursue the potential of transdisciplinary research by cultivating the basic mindset to perceive the issues they are trying to address objectively.

For Transdisciplinary Laboratory Rotation I a and Transdisciplinary Laboratory Rotation I b, the following four subjects are provided according to the university where the subject is held, —university of the laboratory where you are researching.

Transdisciplinary Laboratory Rotation I a (at KU) {1}

Transdisciplinary Laboratory Rotation I b (at KU) {1}

Transdisciplinary Laboratory Rotation I a (at JAIST) {1}

Transdisciplinary Laboratory Rotation I b (at JAIST) {1}

From the above, you must earn at least one credit from Transdisciplinary Laboratory Rotation I a (at JAIST) {1} and Transdisciplinary Laboratory Rotation I b (at JAIST) {1}. As such, students must do a laboratory rotation at JAIST. Students should decide on the laboratory where they will conduct their research after taking into account the content of Transdisciplinary Session I and consulting closely with their supervisor. Of the Four Forces that form the "Methodology of Science Integration" basis, this subject is positioned to foster Force 4: The "Force" for Designing.

[Credit requirements for Transdisciplinary Experience Courses]

*Meet the below requirements simultaneously and earn four or more credits from Social Implementation Courses.

(1) Earn two credits from Transdisciplinary Session I.

As this is a jointly held course, these two credits will be treated as one credit from Kanazawa University and one from JAIST

(2) From the below, at least one credit must be earned from JAIST

Transdisciplinary Laboratory Rotation I a (at KU) {1}

Transdisciplinary Laboratory Rotation I b (at KU) {1}

Transdisciplinary Laboratory Rotation I a (at JAIST) {1}

Transdisciplinary Laboratory Rotation I b (at JAIST) {1}

3.3 Social Implementation Courses

Internships and Off-Campus Research Training are provided. With the Four Forces that have been fostered as a foundation, focusing on on-site learning, students will learn how the seeds of research come into being as research outcomes or businesses at research facilities and companies and how they are linked to innovation.

Students will decide their internship location (domestic or international private corporation, public research institute, university, research institute, etc.) after consulting with their supervisor. Also, students shall notify the Graduate School of Frontier Science Initiative one week before their internship begins.

Details are listed on IV-8 Internships and Off-Campus Research Training.

Application forms for internships can be downloaded from the "To Students" section of the Graduate School website.

[Credit requirements for Social Implementation Courses]

*To meet the below requirements while at the same time earning four or more credits from Transdisciplinary Experience Courses

・Earn at least one credit from the Social Implementation Courses held at your home university.

3.4 Specialized Subjects

Specialized Subjects are provided so that students can obtain specialist knowledge in line with their research theme and based on the fundamental knowledge and skills obtained in the first and second years. At least ten credits are required as a core requirement (at least 12 credits for Research Planning for Ph.D. Course).

Specialized Subjects are divided into four categories, Common Subjects, Life Science Subjects, Materials Science Subjects, and Social Systems Science Subjects. In accordance with this subject category and the three frameworks for challenging innovations (Three Challenges), students must take at least two subject categories focusing on the below subject categories while receiving guidance from their supervisor. Consequently, students will refine their specialist knowledge and integrate multiple scientific fields.

I: Life Innovation students: Life Science Subjects

II: Green Innovation students: Materials Science Subjects

III: Systems Innovation students: Social Systems Science Subjects or Materials Science Subjects

Credit requirements for Specialized Subjects

*Meet the below requirements at the same time.

(1) Students who have chosen Master's Thesis Project or Research Project to compile their research must earn at least ten credits from Specialized Subjects. Also, students who have chosen Research Planning for Ph.D. Course must earn at least 12 credits from Specialized Subjects.

(2) Upon sufficient consultation with your supervisor, in accordance with your chosen frameworks for challenging innovations (Three Challenges), you must take at least two subject categories from Common Subjects, Life Science Subjects, Materials Science Subjects, and Social Systems Science Subjects.

3.5 Research Support Courses

From the second half of the first year until the second year, the course "Seminar and Exercise I {2}" is provided where students can receive instruction and guidance from their supervisor and present their research results at the mid-term presentation mentioned later in this guidebook.

Also, Master Thesis Report I {6} Research Project {2}, Research Planning for Ph.D. Course {2} are provided as subjects to support students' approach to the final compilation of their research. Students choose one of these subjects positioned as core requirements and receive instruction and guidance from their supervisor. Regarding the final research compilation method, students consult with their supervisor based on their research theme ideas and choose one of the below (1) to (3). Students will consolidate and improve the Four Forces that they have fostered until now and work on their research theme based on the specialized knowledge they have accumulated adequately.

Research Compilation Methods and Elective Subjects

(1) Master's Thesis

Master's Thesis is chosen by students who have set a research theme that will validate a hypothesis established to contribute to the resolution of social issues. Students will compile their research in a thesis format.

Elective subject: Master Thesis Report I {6}

(2) Research Project

Research Project is chosen by students who have set a research theme that will design new facts and derive the correlation and causal relationship of phenomena based on a wide range of facts and data, including existing research, to contribute to the resolution of societal issues.

Elective subject: Research Project {2}

(3) Research Planning for Ph.D. Course

Research Planning for Ph.D. Course is chosen by students who will advance to the Doctoral Level Section of the Integrated Course. The survey must be related to the Doctoral Level Section of the Integrated Course's research theme, and outcomes of the research are to be compiled as a Research Planning for Ph.D. Course Report.

Elective subject: Research Planning for Ph.D. Course {2}

Credit Requirements for Research Support Courses

*Satisfy all of the requirements for the chosen research compilation method.

(1) Students who chose master's thesis

・Earn the six credits from Master Thesis Report I (KU) and two credits from Seminar and Exercise I (JAIST)

(2) Students who chose Research Project

・Earn the two credits from Research Project (KU) and the two credits from Seminar and Exercise I (JAIST).

・Earn at least 18 credits from Transdisciplinary Experience Courses, Social Implementation Courses, and Specialized Subjects, after sufficiently consulting with your supervisor and satisfying the requirements from 3.1 to 3.4.

(3) Students who have chosen Research Planning for Ph.D. Course

・Earn the two credits from Research Planning for Ph.D. Course (KU) and the two credits from Seminar and Exercise I (JAIST).

・Earn at least 20 credits from Transdisciplinary Experience Courses, Social Implementation Courses, and Specialized Subjects, after sufficiently consulting with your supervisor and satisfying the requirements from 3.1 to 3.4.

4 Conditions for Completion

Students must satisfy all of the below requirements for completion. Please note, after consulting with their supervisor, it is the students' responsibility to check whether they have satisfied the requirements.

(1) As a general rule, students must be enrolled in the Master's Level Section of the Integrated Course for at least two years.

(2) After receiving the necessary research guidance, students who have chosen Master's Thesis Project or Research Project must have submitted a master's thesis or a Research Project Report and must have passed the screening process or final test. Students who have chosen Research Planning for Ph.D. Course must have submitted a Research Planning for Ph.D. Course Report and must have passed the Qualifying Examination.

(3) Students must earn at least ten credits from subjects held at JAIST. Please note that for 3.2 and 3.5, as there are JAIST compulsory subjects (total four credits) set as below, the remaining six credits must be earned from subjects held at JAIST. (The numbers inside the [] below are the number of JAIST credits available)

Transdisciplinary Experience Courses

Transdisciplinary Session I [1] (One out of the two credits is counted as a JAIST credit.)

Transdisciplinary Laboratory Rotation I a (at JAIST) [1] or Transdisciplinary Laboratory Rotation I b (JAIST) [1]

・Research Support Courses

Seminar and Exercise I (JAIST) [2]

(4) Students must earn at least 32 credits, including credits that have been certified to meet the credit requirements in the above 3.1 to 3.5. However, students who have chosen Research Planning for Ph.D. Course as the method for compiling their research must have earned at least 34 credits.

(5) For subjects held at KU or JAIST, six credits from Optional Subjects can be included in the conditions for completion. For example, if you have earned credits from subjects held by your supervisor at other graduate schools of KU, a maximum of six credits can be included in the conditions for completion. However, for subjects held at KU, this is limited to subjects of the master's course or Master's Level Section of the Integrated Course, and subjects for which the relevant Graduate School has allowed to be taken. For subjects held at JAIST, this is limited to the K・I・M・Nxxx subjects of the Division of Advanced Science and Technology. However, please note that JAIST subjects taken as

Optional Subjects cannot be included in the ten credits listed in (3).

(6) For credits earned from other graduate schools before admission (however, this is limited to those within the scope of the subjects of this Division held at KU) and credits earned at other graduate schools including other KU graduate schools, up to six credits can be included in the conditions for completion when approved by the graduate school conference.

(7) As part of initiatives to improve English proficiency at KU, all students enrolled in the master's program, as a general rule, are to take an external English test. Students are to submit a copy of their external English test score (minimum score of 400 and taken within the last two years) to the Graduate School of Frontier Science Initiative Affairs Section at the same time as applying for a degree. This is a requirement for the approval of credits for "Master Thesis Report Ⅰ(KU)", "Fusion Science Problem Study (Kanazawa)", or "Research Planning for Ph.D Course(KU)". Credit will be granted to students who have scores of English proficiency tests other than TOEIC, if their English proficiency is deemed to be equivalent to the above scores.

(8) It is recommended that master's theses (including Problem study) be written in a foreign language, but exceptions may be made in special circumstances. If exceptions are made, a separate document in English describing the contents of the thesis (short paper: 400-800 words for a master's thesis, no more than 2 pages with figures and tables) must be prepared and attached to the thesis. It is acceptable to submit an abstract of the thesis in Japanese even when the above document is attached.

5 Course Completion Examples

Model A (Systems innovation student chooses master's thesis)

Selection Method	Category	Subject Name	Period Held	Credit(s) KU	Credit(s) JAIST
1 First, earn at least 4 credits from Core Courses, with a focuse on compulsory subjects.	Core Courses	Research Ethics (compulsory)	Q1, Fri 4	1	
		Entrepreneurial Core Technology and Strategy	Q2, Tue 6	1	
		Introduction to Practical Data Analysis and Statistics a (compulsory elective)	Q1, Mon 5	1	
		Introduction to Practical Data Analysis and Statistics b (compulsory elective)	Q2, Mon 5	1	
			Subtotal	4	
2 Earn at least 4 credits from Transdisciplinary Experience Courses and Social Implementation Courses, with a focuse on compulsory subjects. For Social Implementation Courses, at least one of the subjects offered at Kanazawa University is required.	Transdisciplinary Experience Courses	Transdisciplinary Session I (compulsory)	First year summer intensive lectures	1	1
		Transdisciplinary Laboratory Rotation I a (JAIST) (compulsory)	First year, second semester		1
	Social Implementation Courses	Off-Campus Research Training a(KU)	During vacation	1	
			Subtotal	2	2
3 For Specialized Courses, if possible, we recommend you initially take three subjects (6 credits) offerd on Tuesday and Thursday at JAIST.	Specialized Courses	System Optimization	Q1 Tue 1/Thu 2		2
		Network Science	Q1 Tue 2/Thu 1		2
		Introduction to Experimental Philosophy	Q1 Tue 4/Thu 4		2
4 Also, earn 8 credits worth of subjects of two or more categories from KU Specialized Courses not held at the same time as JAIST subjects. (You can add up to 6 credits from subjects of other divisions to the conditions for completion.)		Data Mining a	Q1, Mon 1	1	
		Data Mining b	Q2, Mon 1	1	
		Lightwave Engineering a	Q1, Wed 3	1	
		Lightwave Engineering b	Q2, Wed 3	1	
Common Subjects		Biomechanical Engineering Ⅰa	Q3, Tue 2	1	
Materials Science Subjects		Biomechanical Engineering Ⅰb	Q4, Tue 2	1	
Social Systems Science Subjects		Elementary Theories of Transdisciplinary Science on Cognition and Behavior a	Q1, Thu 2	1	
		Elementary Theories of Transdisciplinary Science on Cognition and Behavior b	Q2, Thu 2	1	
		Intelligent Mobile Robot Ⅰa	Q3, Fri 5	1	
		Intelligent Mobile Robot Ⅰb	Q4, Fri 5	1	
			Subtotal	10	6
5 For Research Support Courses, this is the only combination for students that choose a master's thesis as their final project.	Research Support Courses	Seminar and Exercise I (JAIST)	First year, second semester onwards		2
		Master Thesis Report I (KU)	Second year	6	
			Subtotal	6	2
			Total	32	

JAIST Total	:	10

Model B (Green innovation student chooses master's thesis)

Selection Method	Category	Subject Name	Period Held	Credit(s) KU	Credit(s) JAIST
1 First, earn at least 4 credits from Core Courses, with a focuse on compulsory subjects.	Core Courses	Research Ethics (compulsory)	Q1, Fri 4	1	
		Entrepreneurial Core Technology and Strategy	Q2, Tue 6	1	
		Introduction to Practical Data Analysis and Statistics a (compulsory elective)	Q1, Mon 5	1	
		Introduction to Practical Data Analysis and Statistics b (compulsory elective)	Q2, Mon 5	1	
			Subtotal	4	
2 Earn at least 4 credits from Transdisciplinary Experience Courses and Social Implementation Courses, with a focuse on compulsory subjects. For Social Implementation Courses, at least one of the subjects offered at Kanazawa University is required.	Transdisciplinary Experience Courses	Transdisciplinary Session I (compulsory)	First year summer intensive lectures	1	1
		Transdisciplinary Laboratory Rotation I a (JAIST) (compulsory)	First year, second semester		1
		Transdisciplinary Laboratory Rotation I a (KU)	First year, second semester	1	
	Social Implementation Courses	Internship b(KU)	During vacation	2	
			Subtotal	4	2
3 For Specialized Courses, if possible, we recommend you initially take three subjects (6 credits) offerd on Tuesday and Thursday at JAIST and remote subjects.	Specialized Courses	Introduction to Cognitive Science	Q2 Tue 1/Thu 2		2
		Polymer Chemistry I	Q2 Tue 2/Thu 1		2
4 Also, earn 8 credits worth of subjects of two or more categories from KU Specialized Courses not held at the same time as JAIST subjects (You can add up to 6 credits from subjects of other divisions to the conditions for completion.)		Instrumental Analytical Chemistry [Remote]	Q2 Wed 1/Fri 2		2
		Advanced solid state physical chemistry Ⅰa	Q1, Mon 3	1	
		Advanced solid state physical chemistry Ⅰb	Q2, Mon 3	1	
		Advanced study of solar cell technology I	Q3-4, Fri 2	2	
Common Subjects		Science in Archaeology a	Q3, Wed 5	1	
Materials Science Subjects		Science in Archaeology b	Q4, Wed 5	1	
Social Systems Science Subjects		Optional Subjects (other divisions)		2	
			Subtotal	8	6
5 For Research Support Courses, this is the only combination for students that choose a master's thesis as their final project.	Research Support Courses	Seminar and Exercise I (JAIST)	First year, second semester onwards		2
		Master Thesis Report I (KU)	Second year	6	
			Subtotal	6	2
			Total	32	

JAIST Total	:	10

6 Regarding the Numbering of Subjects Held at JAIST

The first character of the JAIST subject number represents JAIST's unique subject categories. K is the School of Knowledge Science, I is the School of Information Science, and M is the School of Materials Science.

Also, the three-digit subject number shows the class level. 100- are introductory subjects, 200- are core subjects, and 400- are advanced subjects.

Please note that classes held in English have an E at the end of the subject number. Classes held in both English and Japanese have EJ at the end of the subject number.

K **I** **M**	**School of Knowledge Science Subjects** **School of Information Science Subjects** **School of Materials Science Subjects**	**100-** **200-** **400-**	**Introductory Subjects** **Core Subjects** **Advanced Subjects**	**Blank** **E** **EJ**	**Japanese** **English** **English and Japanese**

7 Class Registration and Notification of Grades

7.1 Class Registration

The class registration for class subjects held at KU is carried out online. For more information, please refer to the Student Handbook. Please remember to register for the compulsory subjects, Transdisciplinary Session I and Internship (KU).

The class registration for class subjects held at JAIST is carried out using the JAIST academic affairs system.

If you wish to take subjects outside of this Division as Optional Subjects (other divisions at KU or JAIST), first, please complete the necessary items on the "Request to Take Class Subjects from Other Divisions" attached to the notification e-mail from the Graduate School of Frontier Science Initiative. Next, have your class instructor and supervisor attach their seal to the request, and then submit the request to the Graduate School of Frontier Science Initiative within the period designated by the KU Graduate School (once for the first semester and once for the second semester).

7.2 Grade Notification

Grade notification for KU and JAIST subjects will be carried out online.

7.3 Syllabus

The syllabus will be made available on the website of both universities and the website of the Graduate School (Top Page - To Students)

8 Internships and Off-Campus Research Training

8.1 Class Subjects

Internship a (KU) 1 credit　　Internship duration: 1 to 2 weeks

Internship b (KU) 2 credits　　Internship duration: 2 weeks or more

Off-Campus Research Training a (KU) 1 credit　　Training duration: 1 to 2 weeks

Off-Campus Research Training b (KU) 2 credits　　Training duration: 2 weeks or more

8.2 Internship and Training Content

・Experience real-world work or research, or decide on and work to solve a specific theme.

・Facility tours, company explanation sessions, and studying abroad for languages will not be accepted as class subjects.

Also, if the training does not align with the subject's objective, it may not be accepted.

8.3 Internship and Training Period

・There is no set period. However, we recommend that students take internship and training during the holidays of their first year (especially during summer vacation).

・Students must complete the internship and training two months before their second-year degree application at the latest and must submit the report.

8.4 Internship and Training Duration

・As a general rule, at one place, we will set one week as five days and one day as eight hours.

・If the internship and training will be done at one place, then an internship or training that takes place over a longer period is also permissible. (For example, twice a week for five weeks, or once a week for ten weeks.)

・For every subject taken, one internship or training must be done at one institution. (Combinations of less than one week at three or more institutions are not permitted.)

・Days for travel are not included in the internship and training duration.

8.5 Internship and Training Location

Internships

・Organizations including private companies, government institutions, NPOs, and public interest corporations

・Medical institutions, care facilities, or equivalent institutions

Off-Campus Research Training

・Universities (excluding your own), research institutions, institutes, test facilities, or equivalent institutions

*Both domestic and international institutions are permitted.

8.6 Preliminary Internship Training (Required for internship students)

Internship students must attend the "Lecture on Manners" as preliminary training for the internship. (Students will be informed of the schedule at a later date. Students only have to attend one of the two sessions.) If students cannot attend either session for unavoidable reasons such as overlapping with lesson time, then as an alternative, it is possible to borrow and watch a DVD of the lecture lent out by the Career Support Office of the Student Affairs Department.

How to register attendance: Acanthus Portal-Academic Information Services-Portfolio-Career System-Career Events

8.7 How to Find a Place to do your Internship and Training

・From company and job information websites

・From the list of available institutions on the KU Career Support Office

Https://www kanazawa-u.ac.jp/education/employment/students/internship (KU Website-Current Students-Career Support-for Current Students-Internship)

・From the list of host companies on the KU science and engineering internship website

https://www.se kanazawa-u.ac.jp/gakunai/internship/index html

(KU website: Colleges, Schools, and Graduate Schools-College of Science and Engineering-Click here for college websites (at the bottom)- Job hunting and internships-Science and engineering internship-web site of job hunting and internships)

*However, negotiations will be necessary to host students at the listed companies, so please consult with the Graduate School of Frontier Science Initiative.

・Introduction of Supervisors

8.8 Enrolling in Insurance Plans

Students who are not enrolled in the two below insurance plans that were compulsory at the time of admission cannot attend the internship. If you are not enrolled, please do so at your earliest convenience. International students will be informed separately regarding insurance.

・Personal Accident Insurance for Students Pursuing Education and Research

・Liability Insurance coupled with PAS A Course

8.9 Support for Travel Expenses

We will subsidize travel expenses for participation in internships (for which credits are approved) and Off-Campus Research Training. We will inform students at a later date regarding the subsidy amount and how to apply.

8.10 Notification and Feedback

As you must be evaluated by the internship or training provider, it is necessary to ask that they complete a feedback sheet. Once the place of internship or training has been decided, students are to submit the "Pledge and Notification of internship/off-campus research training" (available to download from the graduate school website) to the Graduate School of Frontier Science Initiative at least one week before the start of the internship or training. After that, we will prepare a request (includes a stamped return-mail envelope, request, and feedback sheet) for the internship or training provider at the Graduate School of Frontier Science Initiative so students are to come and collect it within the specified period. Once the internship or training has begun, students are to pass the request to their internship or training and ask that they complete and return the feedback sheet. Please note, students are to request an English translation of the feedback sheet by e-mail if their place of internship or training is located overseas.

Also, the feedback sheet will be provided to the student as a feedback score at a later date.

8.11 Internship and Training Report

Within one month of the end of the internship or training, students are to complete the "Report of Internship/off-campus research training" (available to download from the graduate school website) and report the content of their internship or training to their supervisor, have their supervisor sign the report, and then submit the report to the Graduate School of Frontier Science Initiative.

8.12 Assessment

Students will be evaluated holistically based on the Internship and Off-Campus Research Training Report submitted by students and the feedback sheet submitted by their place of internship.

8.13 Considerations for the Internship and Training

・You are not to withdraw from the internship or training once their place of internship or training has been decided.

・A bad attitude during the internship or training will negatively affect the subsequent hosting of future students as well as job offering. Therefore, you must keep in mind that you are representing Kanazawa University.

・Strictly adhere to confidentiality obligations. Keep information obtained during your internship or training confidential indefinitely. Also, do not post obtained information on social media or internet forums.

・In the rare case you break or lose equipment of your place of internship or training, this will be covered by the insurance, so please report the matter. Also, please do not take home equipment.

8.14 Other

- You must take a separate risk management orientation if your place of internship or training is overseas.
- If you take an internship or training for which credits are not certified (non-regular curriculum), to ensure that insurance will apply in the unlikely event of an accident before your internship or training, please make sure to complete the “Pledge and Notification of internship/off-campus research training” and submit this to the Graduate School of Frontier Science Initiative.

V [Master’s Program] Education and Research Guidance Framework

As the first stage of the system for education and research guidance, in April of the first year, students will be assigned to the laboratory of the supervisor (KU) requested at the application. Subsequently, in October of the first year, your second supervisor (JAIST) will be decided. Therefore, this ensures a system where both universities’ academic staff work together to conduct research guidance, providing detail-oriented guidance for each student.

1 Supervisors (KU)

Supervisors take on the primary role in providing education and research guidance for their students. This includes guidance on taking classes related to their student’s research theme, guidance on research, and thesis writing guidance. They focus on the guidance of their students in cooperation with second supervisors.

Under the guidance of their supervisor, students set a research theme that combines multiple scientific fields and is related to science, technology, and innovation. Based on research theme ideas about their chosen research theme, students, while consulting with their supervisor, aim to decide their final research compilation method for their master’s thesis by the end of the first year. Supervisors aim to compile their students’ research outcomes in a master’s thesis and give guidance about literature review and research activities.

2 Second Supervisor (JAIST)

Second supervisors cooperate with supervisors and give guidance and advice from a different perspective so that their student’s research can integrate multiple scientific fields.

Students take on the guidance and advice from their second supervisor, who has a different perspective than their supervisor regarding the student’s research theme. Through joint research, discussions, and study with the second supervisor and other students, students enhance their expertise regarding their research theme while learning the different approaches of different fields.

Second supervisors are academic staff from JAIST. However, they place importance on giving guidance and advice through discussions in person or over Skype and will also give guidance and advice through e-mail as necessary.

3 Research Cooperation Faculty (KU)

Research Cooperation Faculty’s area of specialization differs from that of principal academic advisors, and they give advice and consultation to students regarding the entire research guidance environment. They are assigned to all graduate students enrolled at KU.

Also, as Research Cooperation Faculty’s role overlaps with that of Advice Faculty—faculty assigned to all students enrolled at KU to support them with student life— at Kanazawa University Graduate School, Research Cooperation Faculty also take on the role of Advice Faculty.

Please note, after notification of the decision regarding Research Cooperation Faculty, you are to contact your assigned faculty directly and arrange biannual consultations with them (around June and November).

VI [Master's Program] Degree Awarding

1 Degree Application

After obtaining the approval of their supervisor, students who are predicted to meet the conditions for completion (excluding Master Thesis Report I, Research Project, Research Planning for Ph.D. Course) and will apply for academic degree conferral are to submit the Academic Degree Application Form and required documentation to the Graduate School of Frontier Science Initiative.

The Academic Degree Application Form's submission date will be specified by KU two months before the month of expected course completion.

2 Submission of Master's Thesis and Research Project Report

After obtaining the approval of their supervisor, degree applicants who chose either Master's Thesis Project or Research Project are to submit their Master's Thesis or Research Project Report to the Graduate School of Frontier Science Initiative by a date specified by KU.

Degree applicants that chose Research Planning for Ph.D. Course will be informed separately.

3 Mid-Term and Final Presentations

For the degree-seeking thesis screening process, a mid-term presentation session will be held in August of the second year, and the final presentation session will be held in February of the second year. The mid-term and final presentations will be attended by supervisors, second supervisors, and the full-time faculty of this Division. At the mid-term presentation session, students will receive wide-ranging advice regarding their future research activities. The final presentation session will also be open to full-time faculty from other divisions of both universities and students.

4 Academic Thesis Screening Process

The academic thesis screening process will be conducted at KU. The screening process's examination committee will consist of at least three people, at least two from KU and at least one from JAIST. The criteria for review are as outlined in "Thesis Screening Criteria for Master's program, Division of Transdisciplinary Sciences". During the screening process, grading will be conducted after carefully considering the evaluation and opinions given at the mid-term and final presentations.

Thesis Screening Criteria: https://gsinfiniti.w3 kanazawa-u.ac.jp/student/

5 Conferral of Academic Degrees

Based on the above academic thesis screening process results, the conferral of academic degrees will be discussed at the liaison council established by both universities. At the graduate school conference, based on results of the academic degree screening process and the evaluation and opinions the student was awarded at the mid-term and final presentations, discussions will be held from the perspective of:

(1) Problem-solving ability

(2) Specialist knowledge and implementation ability

(3) Comprehension and implementation ability of other fields

(4) Ability to communicate and express oneself

(5) Research Ethics

With this result, after necessary deliberation at the graduate school conference, we will confer academic degrees.

6 Early Completion

Students with excellent marks can shorten their enrollment period and complete the integrated course early.

The criteria for early completion are as below. Students who request early completion must inform the Graduate School of Frontier Science Initiative one month before their degree application.

(1) To have earned all conditions for completion credits, excluding Research Support Courses, in the semester prior to when early completion is requested.

(2) On the degree application deadline for which completion is requested, the student has a GPA of 3.3 or higher in all Core Courses and Specialized Subjects taken.

(3) On the degree application deadline for which completion is requested, at least one peer-reviewed academic paper that was submitted while student was enrolled is published or accepted (publishing journal limited to journals listed on Scopus) of which the student is the lead author or corresponding author.

7 Schedule Leading up to Degree Obtainment

Below is the typical schedule for students who entered in April and chose the Master's Thesis Project or Research Project and will complete it in two years. Students who chose Research Planning for Ph.D. Course will be informed separately. As only the main items are listed below, please check the Graduate School website regarding specific dates and items that are not listed.

In the case of students entering in October, it will be approximately six months later. However, the "Transdisciplinary Session I" and "Transdisciplinary Laboratory rotation I" will be held at the same time as those who enter in April of the following year.

Month	First Year	Second Year
April	・Assigned to a laboratory *Assigned to supervisor's laboratory (KU) ・Take Core Courses *Taken between the first and third quarter (estimate)	
May	・Confirmation of Research Cooperation Faculty (Advice Faculty)	
June		
July		
August	・ Preference survey for Transdisciplinary Laboratory Rotation I instructor ・Preference survey for second supervisor (JAIST) ・Internship * Between August and March for the first year (estimate)	・Mid-Term Presentation Session
September	・Take Transdisciplinary Session I ・ Confirmation of Instructor in charge of Transdisciplinary Laboratory Rotation I	

October	・Confirmation of second supervisor (JAIST) ・Commencement of Transdisciplinary Laboratory Rotation I * Between October and January of the first year (estimate)	
November		
December		
January		・Submission of Academic Degree Application Form
February		・Master's Thesis, submission of the Research Project Report ・Final Presentation Session ・Master's thesis review, Research Project Report review
March	・Choose Master's Thesis, Research Project, or Research Planning for Ph.D. Course as a research completion method	・Degree conferment

VII [Master's Program] WISE Program

1 WISE Program for Nano-Precision Medicine, Science, and Technology

The "WISE Program" is an integrated five-year doctoral program that brings together the world's top-level education and research capabilities through systematic collaboration with domestic and international external institutions such as universities, research institutions, private companies. The program aims to take the lead in the creation and utilization of new knowledge, create value that will drive the next generation, as well as developing doctoral graduates that can pursue the solution of social issues and give rise to innovation in society (high-level "intellectual professionals").

The WISE Program for Nano-Precision Medicine, Science, and Technology targets five types of diseases in humans: Cancer, lifestyle diseases, neurological diseases, and diseases caused by small particulates and nanomaterials. Under the outstanding research environment and results of the Nano Life Science Institute, "WPI-NanoLSI," with its world-class research capability and researchers, the Program creates innovative disease prevention, diagnosis, and treatment through an understanding and control at the nano level. The Program also fosters the human resources that will produce the innovation required for building the people's health foundation, which is essential to bring about Society 5.0.

Successful applicants of the Kanazawa University Graduate School who have passed the WISE Program for Nano-Precision Medicine, Science and Technology screening test can enroll in the WISE Program for Nano-precision Medicine, Science and Technology.

2 Classification of Credits earned from WISE Program for Nano-Precision Medicine, Science and Technology Subjects

The credit classification for students of the Division of Transdisciplinary Sciences who take the WISE Program for Nano-Precision Medicine, Science and Technology is as follows.

Name of Class Subjects	Number of Credits		Classification of Earned Credits
	Required	Elective	
An Overview of Nano-Precision Medicine and Science and Technology	1		Optional Subjects
Introduction to Nanoscience*2	2		Optional Subjects
Management of Innovation	1		Optional Subjects
Introduction to Mathematical and Data Science	1		Introduction to Practical Data Analysis and Statistics
Laboratory Rotation Seminar	1		Transdisciplinary Laboratory Rotation I b (KU)
Environmental and Energy Technology, English		1	Optional Subjects

VIII [Doctoral Program] Course Outline

1 List of Subjects (for KU and JAIST)

Category		Subject Name	University	Year	Credit(s)		Completion Requirements
					Compulsory	Elective	
Core Courses		Transdisciplinary Session II *1	Joint	1	2		At least three credits, including compulsory subjects, must be earned from Core Courses. For *1 subjects, one credit is from JAIST and one from KU, for a total of two credits. KU Students must take *2 subjects
		Transdisciplinary Laboratory Rotation II (KU)	KU	1,2		1	
		Transdisciplinary Laboratory Rotation II (JAIST) *2	JAIST	1,2		1	
Social Implementation Courses		Overseas Research Challenge A (KU) *3	KU	1,2		1	At least one credit must be earned from Social Implementation Courses. KU Students must take *3 subjects.
		Overseas Research Challenge A (JAIST)	JAIST	1,2		1	
		Overseas Research Challenge B (KU) *3	KU	1,2		2	
		Overseas Research Challenge B (JAIST)	JAIST	1,2		2	
		Overseas Research Challenge C (KU) *3	KU	1,2		4	
		Overseas Research Challenge C (JAIST)	JAIST	1,2		4	
		International Internship (KU) *3	KU	1,2		1	
		International Internship (JAIST)	JAIST	1,2		1	
Specialized Courses	Common Subjects	Fostering the Independence of Researchers* 4	KU	1		1	At least nine credits must be earned from Specialized Courses. Students must take subjects from two categories or more of the following categories: Common Subjects, Life Science Subjects, Materials Science Subjects, and Social Systems Science Subjects. At least one credit must be earned from *4 subjects. After consulting with their supervisor, students who have not studied statistics are strongly recommended to take one of the *5 subjects. However, this is not included in the conditions for completion.
		Introduction to Practical Data Analysis and Statistics *5	KU	1		2	
		Advanced Data Mining	KU	1, 2, 3		2	
		Advanced Bioinformatics	KU	1, 2, 3		2	
		Management Science	KU	1, 2, 3		2	
		Innovation Theory and Methodology for Total Capability Development *4	JAIST	1		1	
		Public Economics for Community Management	JAIST	1, 2, 3		2	
		Advanced Data Analytics	JAIST	1, 2, 3		2	
		Statistics for Data Analytics II *5	JAIST	1		2	
	Life Science Subjects	Integrated Life Sciences	KU	1, 2, 3		2	
		Structure and Dynamics of Biological Molecules	KU	1, 2, 3		2	
		Nanobiology	KU	1, 2, 3		2	
		Molecular and Cellular Biology	KU	1, 2, 3		2	
		Molecular Microbiology	KU	1, 2, 3		2	
		Chronic Care/Wound Management: Lecture	KU	1, 2, 3		2	
		Functional Protein Device	JAIST	1, 2, 3		2	
		Advanced Biofunctions	JAIST	1, 2, 3		2	
		Advanced Biomaterials	JAIST	1, 2, 3		2	
		Advanced Biomolecular Science	JAIST	1, 2, 3		2	
	Materials Science Subjects	Advanced Study of Solar Cell Technology II	KU	1, 2, 3		2	
		Advanced Solid State Physical Chemistry II	KU	1, 2, 3		2	
		Polymer and Material Chemistry	KU	1, 2, 3		2	
		Advanced Bio-Refinery Engineering II	KU	1, 2, 3		2	
		Advanced Surface and Interface Engineering II	KU	1, 2, 3		2	
		Oxide Device Processing	KU	1, 2, 3		2	
		Oxide Electronics	KU	1, 2, 3		2	
		Thin-Film Electronics	KU	1, 2, 3		2	

Category		Subject Name	University	Year	Credit(s)		Completion Requirements
					Compulsory	Elective	
Specialized Courses	Materials Science Subjects	Functional Nanomaterials	JAIST	1, 2, 3		2	
		Electronics	JAIST	1, 2, 3		2	
		Polymer Chemistry II	JAIST	1, 2, 3		2	
		Analytical Mechanics	JAIST	1, 2, 3		2	
		Optical Properties of Solids	JAIST	1, 2, 3		2	
		Advanced Device Physics	JAIST	1, 2, 3		2	
		Molecular and Functionality Design of Polymers	JAIST	1, 2, 3		2	
		Materials Design	JAIST	1, 2, 3		2	
		Materials Morphology	JAIST	1, 2, 3		2	
		Electronic Properties of Condensed Matter	JAIST	1, 2, 3		2	
	Social Systems Science Subjects	Intelligent Mobile Robot II	KU	1, 2, 3		2	
		Biomechanical Engineering II	KU	1, 2, 3		2	
		Measurement Systems	KU	1, 2, 3		2	
		Optical Sensing	KU	1, 2, 3		2	
		Digital Video Processing	KU	1, 2, 3		2	
		Verification of Distributed, Parallel and Real-Time Systems	KU	1, 2, 3		2	
		Theories of Transdisciplinary Science on Cognition and Behavior I	KU	1, 2, 3		2	
		Theories of Transdisciplinary Science on Cognition and Behavior II	KU	1, 2, 3		2	
		Advanced Exercise Physiology	KU	1, 2, 3		2	
		Psychology of Learning and Behavior	KU	1, 2, 3		2	
		Interdisciplinary Studies in Archaeology and Cultural Heritage Studies I	KU	1, 2, 3		2	
		Interdisciplinary Studies in Archaeology and Cultural Heritage Studies II	KU	1, 2, 3		2	
		Comparative Prehistory	KU	1, 2, 3		2	
		Modern Neural Computation	KU	1, 2, 3		2	
		Anthropology of Knowledge	JAIST	1, 2, 3		2	
		Knowledge Creation Support Media	JAIST	1, 2, 3		2	
		Social-Technical Complex Systems	JAIST	1, 2, 3		2	
		Advanced Topics in Media Design	JAIST	1, 2, 3		2	
		Advanced Computer Networks	JAIST	1, 2, 3		2	
		Distance Learning System	JAIST	1, 2, 3		2	
		Theory of Advanced Algorithms	JAIST	1, 2, 3		2	
		Robotics and Compute Vision	JAIST	1, 2, 3		2	
		Human Perceptual Systems and its Models	JAIST	1, 2, 3		2	
		Advanced Wireless Networks	JAIST	1, 2, 3		2	
Research Support Courses		Seminar and Exercise II (KU)	KU	1～3		4	At least ten credits must be earned from Research Support Courses. KU Students must take *6 and *7 subjects.
		Seminar and Exercise II (JAIST) *6	JAIST	1～3		4	
		Doctoral Thesis Report II (KU) *7	KU	1～3		6	
		Doctoral Thesis Report II (JAIST)	JAIST	1～3		6	

At least 23 credits must be earned.
(However, for those enrolled from the doctoral program, a total of at least 10 credits must be earned from both KU and JAIST respectively.)

2 Semesters and Class Time

The semesters, class schedules, and class time for KU and JAIST are shown in Appendix 1.

Classes held at KU will be 90 minutes, once a week. For most classes held at KU, class times will be decided depending on coordination with students wishing to take the subject and the instructor in charge. 1-credit quarter subjects (Q1, Q2, Q3, or Q4) will be concluded in eight weeks.

Classes held at JAIST will be 100 minutes, twice a week. These are generally comprised of 2-credit quarter subjects (1-1 quarter, 1-2 quarter, 2-1 quarter, or 2-2 quarter) and will conclude in eight weeks. Please refer to the syllabus for details on each subject. Further, the combination of bi-weekly JAIST classes will be as shown in Appendix 2.

Appendix 1

Category	Semester	Class time
KU	First semester { First quarter (eight weeks) / Second quarter (eight weeks) Second semester { Third quarter (eight weeks) / Fourth quarter (eight weeks) *There will be a period for regular examinations after the end of each class period.	First Period 08:45 - 10:15 Second Period 10:30 - 12:00 Third Period 13:00 - 14:30 Fourth Period 14:45 - 16:15 Fifth Period 16:30 - 18:00 Sixth Period 18:15 - 19:45
JAIST	First semester: 1-1 quarter 1-2 quarter (eight weeks each) Summer intensive lectures (August, September) Second semester: 2-1 quarter, 2-2 quarter (eight weeks each) Winter intensive lectures (February, March) *There will be a period for regular examinations after the end of each class period. For intensive lectures, as a general rule, regular examinations are held after each class.	First period 9:00 - 10:40 Second period 10:50 - 12:30 Third period 13:30 - 15:10 (Tutorial hour) Fourth period 15:20 - 17:00 Fifth period 17:10 - 18:50 ※The tutorial hour is time for a make-up class, supplementary learning, or answering questions and consultations from students regarding the first-period lesson. Depending on the subject, if you do not attend, you may not be able to earn credits, so please follow the directions of the instructor in charge. Please note that there is no tutorial hour for fourth-period classes on Tuesdays and Thursdays.

Appendix 2

	Monday	Tuesday	Wednesday	Thursday	Friday
1	Monday first period class	Tuesday first period class	Wednesday first period class	Tuesday second period class	Monday second period class
2	Monday second period class	Tuesday second period class	Monday first period class	Tuesday first period class	Wednesday first period class
3	First period tutorial hour				
4		Tuesday fourth period class		Tuesday fourth period class	
5					

3 Class Subject Structure and Categories; Credit Requirements

3.1 Transdisciplinary Experience Courses

Transdisciplinary Session II (two credits) and Transdisciplinary Laboratory Rotation II (one credit) are offered as compulsory subjects in the first year. Both are held as upgraded versions of Transdisciplinary Session I and Transdisciplinary Laboratory Rotation I held in the Master's Level Section of the Integrated Course. From the first half of the first year, Transdisciplinary Session II is jointly held at both universities as a compulsory subject. This subject incorporates expertise and methodology from different fields regardless of students' previous field of study. Therefore, in this subject, students introduce their research projects to one another, hold discussions, and hold group work regarding transdisciplinary science topics associated with social implementation (for example, develop new products, start a company, or create solutions to societal issues). In this subject, students will further develop Force 2: The "Force" for Modeling. Subsequently, in Transdisciplinary Laboratory Rotation II, from the first year to the second year, students learn the research methods and approaches from different fields firsthand. JAIST laboratories will be used for laboratory rotation. As a result, students will conduct experimental and theoretical research, and will explore the possibilities of transdisciplinary research while acquiring wide-ranging knowledge and skills that go beyond their specialization. In this subject, students will further improve Force 4: The "Force" for Designing. "Transdisciplinary," in the subject name, refers to the fact that the learning provided will go beyond students' current specialization.

Credit requirements for Transdisciplinary Experience Courses

*Meet the below requirements simultaneously and earn three or more credits.

(1) Earn two credits from Transdisciplinary Session II.

As this is a jointly held course, these two credits will be treated as one credit from KU and one from JAIST.

(2) KU students much earn one credit from Transdisciplinary Laboratory Rotation II (JAIST).

3.2 Social Implementation Courses

From the first year, learning from studying abroad, such as research projects at overseas universities or research institutions in the subject, Overseas Research Challenge, or internships at foreign or global companies in the subject, International Internship is offered as compulsory elective subjects (one of which is required). After completion, students report their findings. Through this, students will be able to further enhance their understanding of their research theme by learning approaches from entirely different fields. Please refer to 7 regarding the Overseas Research Challenge. Students who wish to take International Internship, please contact the Graduate School of Frontier Science Initiative beforehand.

Credit requirements for Social Implementation Courses

・KU students must earn at least one credit from the below subjects.

Overseas Research Challenge A (KU) one credit

Overseas Research Challenge B (KU) two credits

Overseas Research Challenge C (KU) four credits

International Internship (KU) one credit

3.3 Specialized Subjects

In the first year, Fostering the Independence of Researchers (at KU), Innovation Theory and Methodology for Total Capability Development (at JAIST) are offered as compulsory elective subjects (one of which is required). In these courses, students will use practical techniques to learn about how to build a good relationship with the real world and how to actualize future needs. Also, for students who have not yet studied statistics, Introduction to Practical Data Analysis and Statistics (at

KU) and Statistics for Data Analytics II (at JAIST) are provided as subjects to teach the knowledge necessary for conducting transdisciplinary science research at the Doctoral Level Section of the Integrated Course. After consulting with their supervisor, students who have not studied statistics are strongly recommended to take these subjects.

In addition, building upon the basic knowledge and techniques acquired from the first to the third year—including the above subjects—, advanced subjects are configured to develop specialized expertise in line with students' research theme. They are offered as compulsory elective subjects of which nine or more credits will be earned. Science and engineering are core areas (field of study) of educational research from the perspective of producing science, technology, and innovation graduates. However, from the perspective of promoting transdisciplinary science, Specialized Subjects will be classified into the following four subject categories: Common Subjects; Life Science Subjects; Materials Science Subjects; Social Systems Science Subjects. Students are required to earn credits from two of these subject categories. By doing so, students can take sufficient subjects to cultivate specialized expertise. It will also be possible for them to acquire a wide range of deep academic knowledge from the perspective of transdisciplinary studies.

Credit requirements for Specialized Subjects

*Meet the below requirements simultaneously and earn nine or more credits from this course classification.

(1) Upon sufficient consultation with your supervisor, in accordance with your chosen three challenging innovation frameworks (Three Challenges), you must take at least two subject categories from Common Subjects, Life Science Subjects, Materials Science Subjects, and Social Systems Science Subjects.

(2) Earn at least one credit from the below.

Fostering the Independence of Researchers, one credit

Innovation Theory and Methodology for Total Capability Development, one credit

(3) After consulting with your supervisor, students who have not studied statistics are strongly recommended to take one of the below these subjects. However, this is not included in the conditions for completion.

Introduction to Practical Data Analysis and Statistics

Statistics for Data Analytics II

3.4 Research Support Courses

From the first year until the third year, Seminar and Exercise II and Doctoral Thesis Report II are offered as compulsory subjects. In Seminar and Exercise II, students will receive guidance and advice from a second supervisor appointed from JAIST. In addition, under the supervision of the second supervisor, students will learn approaches from different fields through joint research, discussions, and studying with students who have different specializations and further enhance their understanding of their research theme.

Doctoral Thesis Report II is provided as a subject to support students' approach to the final compilation of their research. Here students compile their doctoral thesis by receiving research guidance from their supervisor that includes the utilization of new knowledge and techniques acquired through the Four Forces cultivated thus far, laboratory rotation, and research guidance in other fields.

Credit Requirements for Research Support Courses

・KU students must take the below subjects, and earn ten credits.

Seminar and Exercise II (JAIST), four credits

Doctoral Thesis Report II (KU), six credits

4 Conditions for Completion

Students must satisfy all of the below requirements for completion. Please note, after consulting with their supervisor, it is the students' responsibility to check whether they have satisfied the requirements.

(1) As a general rule, students must be enrolled in the Doctoral Level Section of the Integrated Course for at least three years.

(2) After receiving the required research guidance, students must submit a doctoral thesis and pass the screening and final test.

(3) Students who entered from the Doctoral Level Section of the Integrated Course must earn at least ten credits from subjects held at JAIST. Please note that for 3.1 and 3.4, as there are JAIST compulsory subjects (total six credits) set as below, the remaining four credits must be earned from subjects held at JAIST.

・Transdisciplinary Experience Courses

Transdisciplinary Session II, one credit (one of the two credits is counted as a JAIST credit.)

Transdisciplinary Laboratory Rotation II (at JAIST), one credit

・Research Support Courses

Seminar and Exercise II (JAIST), four credits

(4) Students must earn at least 23 credits, including credits that have been certified to meet the credit requirements in the above 3.1 to 3.4.

(5) For subjects held at KU or JAIST, two credits from Specialized Subjects (Common Subjects) can be included in the conditions for completion. For example, if you have earned credits from subjects held by your supervisor at other graduate schools of KU, a maximum of two credits can be included in the conditions for completion. However, for subjects held at KU, this is limited to subjects of the doctoral course or Doctoral Level Section of the Integrated Course and subjects for which the relevant graduate school has allowed to be taken. For subjects held at JAIST, this is limited to the K・I・M・Nxxx subjects of the Division of Advanced Science and Technology. Please note that JAIST subjects taken as Specialized Subjects (Common Subjects) cannot be included in the ten credits listed in (3).

(6) For credits earned from other graduate schools before admission (however, this is limited to those within the scope of the subjects of this Division held at KU) and credits earned at other graduate schools including other KU graduate schools, up to two credits can be included in the conditions for completion when approved by the graduate school conference.

(7) Students are to submit a copy of their external English test score (minimum score of 450 and taken within the last two years) to the Graduate School of Frontier Science Initiative at the same time as applying for a degree. This is a requirement for the approval of credits for "Doctoral Thesis Report II (KU)". Credit will be granted to students who have scores of English proficiency tests other than TOEIC, if their English proficiency is deemed to be equivalent to the above scores.

(8) It is recommended that doctoral theses be written in a foreign language, but exceptions may be made in special circumstances. If exceptions are made, a separate document in English describing the contents of the thesis (short paper: 1,000-2,000 words for a doctoral thesis, no more than 4 pages with figures and tables) must be prepared and attached to the thesis. It is acceptable to submit an abstract of the thesis in Japanese even when the above document is attached.

5 Course Completion Examples

Model A (Systems innovation student who has enrolled from the Doctoral program)

Selection Method	Category	Subject Name	Credit(s)	
			KU	JAIST
1 Take compulsory subjects. (For KU students, "Transdisciplinary Laboratory rotation II (JAIST)" is a substantial compulsory subject.)	Transdisciplinary Experience Courses	Transdisciplinary Session II (compulsory)	1	1
		Transdisciplinary Laboratory rotation II (JAIST)		1
		Subtotal	1	2
2 Take one subject.	Social Implementation Courses	Overseas Research Challenge A (KU)	1	
		Subtotal	1	
3 Take "Fostering the independence of researchers" from the Common Subjects. First, take two subjects from JAIST. Next, take two subjects from KU. These subjects including "Fostering the independence of researchers" must be choosed from two or more subjects categories.	Specialized Courses	Fostering the independence of researchers	1	
		Theory of Advanced Algorithms		2
		Human Perceptual Systems and its Models		2
		Advanced Data Mining	2	
		Intelligent Mobile Robot II	2	
		Subtotal	5	4
4 For Research Support Courses, this is the only combination. (For KU students, "Seminar and Exercise II (JAIST)" and "Doctoral Thesis Report II (KU)" are substantial compulsory subjects.)	Research Support Courses	Seminar and Exercise II (JAIST)		4
		Doctoral Thesis Report II (KU)	6	
		Subtotal	6	4
		Total	23	

JAIST Total : 10

Model B (Life innovation student who has graduated from the Master's program of the Division)

Selection Method	Category	Subject Name	Credit(s)	
			KU	JAIST
1 Take compulsory subjects. (For KU students, "Transdisciplinary Laboratory rotation II (JAIST)" is a substantial compulsory subject.)	Transdisciplinary Experience Courses	Transdisciplinary Session II (compulsory)	1	1
		Transdisciplinary Laboratory rotation II (JAIST)		1
		Subtotal	1	2
2 Take one subject.	Social Implementation Courses	Overseas Research Challenge A (KU)	1	
		Subtotal	1	
3 Take "Fostering the independence of researchers" from the Common Subjects. Take four subjects from JAIST or KU. (The requirement to take 10 credits from JAIST subjects does not apply, so you can take subjects as you wish.) These subjects including "Fostering the independence of researchers" must be choosed from two or more subjects categories.	Specialized Courses	Fostering the independence of researchers	1	
		Advanced Biomolecular Science		2
		Advanced Bioinformatics	2	
		Integrated Life Sciences	2	
		Advanced bio-refinery engineering II	2	
		Subtotal	7	2
4 For Research Support Courses, this is the only combination. (For KU students, "Seminar and Exercise II (JAIST)" and "Doctoral Thesis Report II (KU)" are substantial compulsory subjects.)	Research Support Courses	Seminar and Exercise II (JAIST)		4
		Doctoral Thesis Report II (KU)	6	
		Subtotal	6	4
		Total	23	

JAIST Total : 8

6 Class Registration and Notification of Grades

6.1 Class Registration

The class registration for class subjects held at KU is carried out online. The details of which will be notified separately.

The class registration for class subjects held at JAIST is carried out using the JAIST academic affairs system.

If you wish to take subjects outside of this Division as Optional Subjects (other divisions of KU or JAIST), first, please complete the necessary items on the “Request to Take Class Subjects from Other Divisions” attached to the notification e-mail from the Graduate School of Frontier Science Initiative. Next, have your class instructor and supervisor attach their seal to the request, and then submit the request to the Graduate School of Frontier Science Initiative within the period designated by the KU Graduate School (once for the first semester and once for the second semester).

6.2 Grade Notification

Grade notification for KU and JAIST subjects will be carried out online.

6.3 Syllabus

The syllabus will be made available on the website of both universities and the website of the Graduate School (Top Page - To Students)

7 Overseas Research Challenge

7.1 Class Subjects

Overseas Research Challenge A, B, C (KU)

7.2 Internship Content

・Conduct research at a foreign university or research institution

・Study abroad only for language acquisition will not be accepted as study abroad for this subject.

7.3 Internship Period

・Not specified.

・Students must complete the internship two months before their third-year degree application at the latest and must submit the report.

7.4 Internship Duration

・Overseas Research Challenge A (KU) one credit: Typically between one to two weeks.

・Overseas Research Challenge B (KU) two credits: Typically between two weeks to two months.

・Overseas Research Challenge C (KU) four credits: Typically more than two months.

*Time for travel, presenting at academic conferences, and days where training was not conducted, are not included in the internship duration.

7.5 Procedures for Students Traveling Overseas

Refer to the below URL and carry out the procedures necessary for KU students when traveling overseas. Take care not to miss anything.

https://sgu.adm kanazawa-u.ac.jp/international/formatsforkustudents/

7.6 Support for Travel Expenses

To be notified separately.

7.7 Notification

As your internship will be evaluated by your place of internship, it is necessary to ask that they complete a feedback sheet. Once your place of internship has been decided, students are to submit the “Pledge and Notification of internship/off-campus research training” (available to download from the graduate school website) to the Graduate School of Frontier Science Initiative at least one week before the start of the internship.

7.8 Study Abroad Report

Within one month of the end of their study abroad, students are to complete the “Study Abroad Report” (available to download from the graduate school website) and report the content of their study abroad to their supervisor, have their supervisor sign the report, and then submit the report to the Graduate School of Frontier Science Initiative.

7.9 Assessment

Students will be assessed using the “Study Abroad Report” that they submit.

7.10 Considerations for the Internship

- You are not to withdraw from the internship once their place of internship has been decided.
- Strictly adhere to confidentiality obligations. Keep information obtained during your internship confidential indefinitely. Also, do not post obtained information on social media or internet forums.
- In the rare case you break or lose equipment of your place of internship, this will be covered by the insurance, so please report the matter. Also, please do not take home equipment.

7.11 Other

Students who wish to have credits for International Internship (KU) certified, must contact the Graduate School of Frontier Science Initiative.

IX [Doctoral Program] Education and Research Guidance Framework

As the first stage of the system for education and research guidance, in April of the first year students will be assigned to the laboratory of the supervisor (KU) requested at the application. The second supervisor (JAIST) will be decided shortly afterward. Therefore, this ensures a system where both universities' academic staff work together to conduct research guidance, providing detail-oriented guidance for each student.

1 Supervisors (KU)

Supervisors primary role is to provide their students with education and research guidance. While receiving reports from students about the content of their research theme and outcomes from research projects abroad and international internships, supervisors give direct guidance to students concerning students' research theme through their daily research activities. They do this while keeping the students' main research field and the implementation of interdisciplinary research in mind. An in-depth meeting will be held about the research theme setting, the utilization of transdisciplinary methodology, and the Four Forces cultivated until now. Based on the meeting outcomes, supervisors will give guidance regarding taking classes, laboratory rotation selection, research, and academic thesis writing. Supervisors will share information regarding students' credit acquisition and research progress with the second supervisor, and while mutually confirming the direction of guidance, they will focus on the guidance of their student.

Under the guidance of their supervisor, students will select a research theme related to science, technology, and innovation that integrates multiple scientific fields. They will also gain many insights and implement the promotion of transdisciplinary science by taking subjects such as a wide range of class subjects, research projects abroad, international internships, and Transdisciplinary Laboratory Rotation II. Supervisors and second supervisors aim for students to compile their research outcomes in a doctoral thesis and give guidance regarding research activities, presentations at academic and international conferences, and the writing and publishing of academic papers.

2 Second Supervisors (One JAIST and one KU or JAIST)

Two academic staff members are chosen as supervisors, with at least one member coming from JAIST. Second supervisors cooperate with supervisors, and while receiving regular updates regarding students' progress, they give guidance and advice from a different perspective from the supervisor, focusing on how to utilize the expertise and methods from their specialization in the students' research field. Regarding guidance from JAIST academic staff, importance will be placed on conducting discussions in person to take advantage of the fact that JAIST is a nearby university. However, JAIST academic staff will also give guidance and advice using online communication tools and e-mail as necessary.

Under the guidance and advice regarding their research theme from the second supervisor, who has a different perspective from their supervisor, students will learn approaches from different fields through joint research, discussion, and study with the second supervisor and other students from both universities. Students will also further their expertise regarding their research theme, acquire problem-solving abilities through the exploration and implementation of the "Methodology of Science Integration," and compile a doctoral thesis regarding the solution to their research theme.

3 Research Cooperation Faculty (KU)

Research Cooperation Faculty's area of specialization differs from that of principal academic advisors, and they give advice and consultation to students regarding the entire research guidance environment. They are assigned to all graduate students enrolled at KU.

Also, as Research Cooperation Faculty's role overlaps with that of Advice Faculty—faculty assigned to all students enrolled at KU to support them with student life— at Kanazawa University Graduate School, Research Cooperation Faculty also take on the role of Advice Faculty.

Please note, after notification of the decision regarding Research Cooperation Faculty, you are to contact your assigned faculty directly and arrange biannual consultations with them (around June and November).

X [Doctoral Program] Degree Awarding

1 Degree Application

After obtaining the approval of their supervisor, students who are predicted to meet the conditions for completion (excluding Doctoral Thesis Report II, and Seminar and Exercise II) and will apply for academic degree conferral are to submit the Academic Degree Application Form and required documentation to the Graduate School of Frontier Science Initiative.

The Academic Degree Application Form's submission date will be specified by KU two months before the month of expected course completion.

2 Doctoral Thesis Submission

After obtaining the approval of their supervisor, degree applicants are to submit their doctoral thesis to the Graduate School of Frontier Science Initiative by a date specified by KU.

3 Thesis Pre-Defense

Thesis pre-defense is held prior to the degree application. Thesis pre-defense will be formed with full-time academic staff playing a central role three months before degree awarding. At the thesis pre-defense, guidance is given regarding whether the research outcomes are suitable for applying for a doctoral degree, based on the Division's educational philosophy as a Science, Technology, and Innovation Graduate. Guidance is also given in reflection of the Divisions educational philosophy regarding whether research outcomes conform to the requirements for applying for a doctorate in transdisciplinary science. With the result of the thesis pre-defense, even in cases where research outcomes conform to the requirements for a doctorate but do not conform to the requirements for a doctorate in transdisciplinary science, advice is given regarding the obtainment of a doctorate in transdisciplinary science, and the supervisor and student are given feedback regarding this result. The supervisor and second supervisor take this into account and give the student guidance for compiling their degree-seeking thesis.

4 Final Presentation

A hearing and final test are held as a final screening for degree-seeking theses. At the hearing, students will present their degree-seeking thesis. Students and faculty attend the hearing from both universities to ensure the transparency and strict evaluation of the screening purposes. Also, a final test regarding the subjects related to the degree-seeking thesis will be held by the screening committee.

5 Academic Thesis Screening Process

The academic thesis screening process will be conducted at KU. The screening process examination committee will consist of five people, with at least two from KU and at least one from JAIST. The criteria for review are as outlined in "Dissertation Screening Criteria for Doctoral program, Division of Transdisciplinary Sciences". During the screening process, grading will be conducted after carefully considering the evaluation and opinions given at the thesis pre-defense and final presentations.

Thesis Screening Criteria: https://gsinfiniti.w3 kanazawa-u.ac.jp/student/

6 Conferral of Academic Degrees

As the mission of this Division is the "promotion of transdisciplinary sciences," screening will be conducted based on whether learning outcomes in the diploma policy have been achieved while taking into account the following perspectives:

as a result of acquiring knowledge and techniques from multiple scientific fields, whether students are able to solve issues related to science, technology, and innovation, and whether they are able to conduct original and novel research in the fields of science and engineering. On this occasion, to ensure the standard of research outcomes, students are required to have published their research in an international journal or at an academic conference. In particular, we will keep in mind the obtainment of a doctorate in transdisciplinary science, however regarding “the ability to create new knowledge by integrating your specialization with other fields,” we will conduct it according to the following criteria.

(1) Does the degree-seeking thesis incorporate transdisciplinary science approaches and integrate the knowledge and technology of multiple fields?

(2) Will the research outcomes lead to the creation of new knowledge?

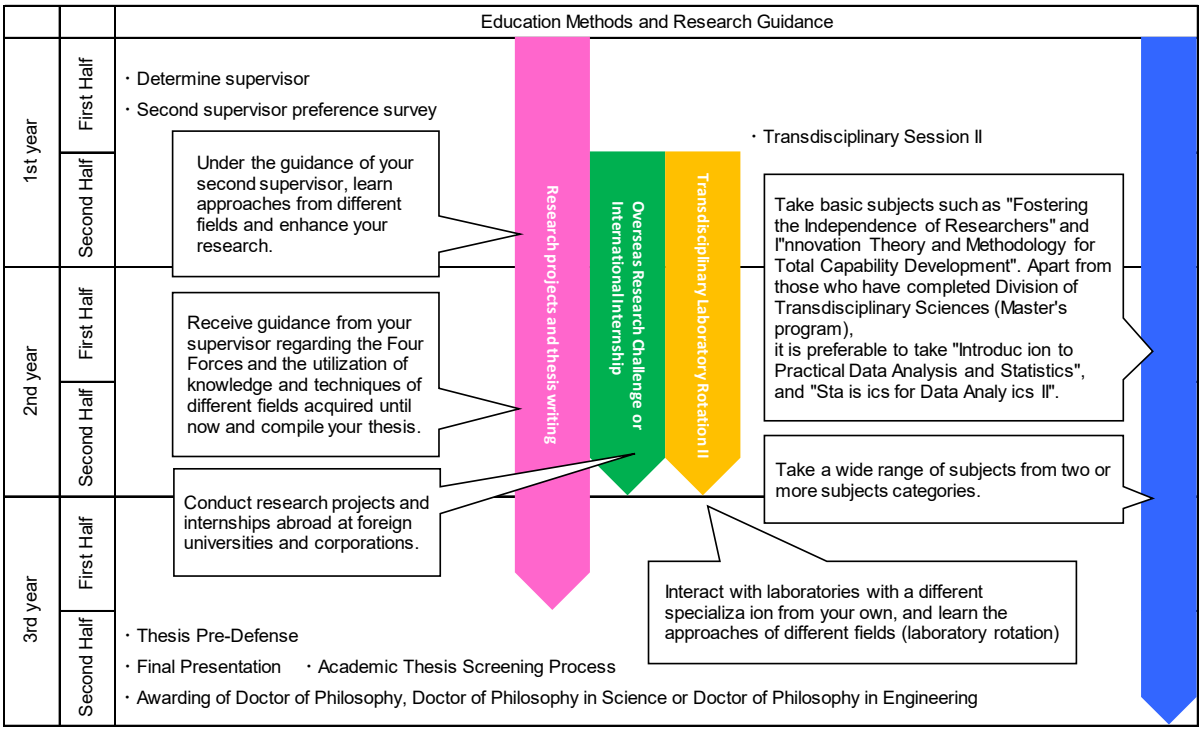
(3) Has the structure of the degree-seeking thesis incorporate the approaches of transdisciplinary science?

Also, even in the case that the degree-seeking thesis does not conform with the standards of a doctorate in transdisciplinary science, screening will be conducted regarding whether it is suitable for the conferment of a doctorate in science or engineering.

7 Schedule

Below is the typical schedule for students who entered in April and will complete the course in three years. As only the main items are listed below, please check the Graduate School website regarding specific dates and items that are not listed.

In the case of students entering in October, it will be approximately six months later. However, the "Transdisciplinary Session II" and "Transdisciplinary Laboratory rotation II" will be held at the same time as those who enter in April of the following year.



8 Early Completion

Students with excellent marks can shorten their enrollment period and graduate early.

The criteria for early graduation are as below. Students who wish to graduate early must inform the Graduate School of Frontier Science Initiative one month before applying for their degree.

(1) To have earned the credits for conditions of completion excluding Research Support Courses six months before the month in which early completion is requested.

(2) Up until three months before the month when the student requests early completion, two peer-reviewed academic papers submitted while enrolled at the Division of Transdisciplinary Sciences, of which the student is the lead author or corresponding author, must have been published or accepted (publishing journal limited to journals listed on Scopus).

XI Other

1 Home University

"Home University" refers to the university for which you have passed the entrance exams and conducted entrance procedures. You are to conduct the payment of tuition, procedures for scholarships, the issue of various certificates, and personal procedures such as leave of absence and withdrawals at your home university.

Please note that you can use libraries, facilities, and information environments at both universities. For more details, please contact the section in charge at each university.

1.1 Certificates

Certificate of Enrollment, Academic Transcript and student discount card are issued at your home university. At KU there are certificates (JR Student Discount Card and Academic Transcript) that can be issued at nine automatic certificate issuing machines on campus, and certificates that require students to apply to the Graduate School of Frontier Science Initiative to be issued (scholarship certificates and PAS enrollment certificates). So please refer to the Handbook for Graduate Students or the KU website for more information.

Also, please do not use JAIST automatic certificate issuing machines to issue certificates.

1.2 Leave of Absence Procedures

Leave of absence and withdrawal procedures are to be carried out at your home university. KU students carry out these procedures at the Graduate School of Frontier Science Initiative.

1.3 Tuition and Scholarships

Please carry out procedures for the payment and exemption of tuition, and JASSO scholarships, etc., at your home university.

2 Acanthus Portal and Kanazawa University ID

At KU, we operate the portal site "Acanthus Portal," which serves many purposes such as course registration, notification of grades, and communications from the university, and also includes scheduler functions. Students will be informed of the "Kanazawa University ID" and the temporary password required for login at orientation. The "Kanazawa University ID" is a very important lifetime ID, so be sure to manage it securely. For more information, please refer to the Handbook for Graduate Students.

3 Network ID and E-mail Address

At KU, registering a network ID is required to obtain an e-mail address and use the Wi-Fi. Please use the below KU Emerging Media Initiative URL to register.

http://www.imc kanazawa-u.ac.jp/service

Please note that the network ID obtained will be your KU e-mail address.
(For example, if your register the network ID abcdefg, then your e-mail will be abcdefg@stu kanazawa-u.ac.jp)

4 Communications from KU and JAIST

At the Graduate School of Frontier Science Initiative, laboratories are located at each campus, so there is no set bulletin board. Communication with students, according to its content, will take place through the following three channels. Please note, we will not assist students who are disadvantaged because they missed communications. If you have changed the e-mail address you registered during admission, you must inform the Graduate School of Frontier Science Initiative.

1. Mainly announcements from the graduate program: Notification by e-mail to the e-mail address registered during admission (change to an easy to contact address possible)
2. Information that needs to be displayed medium to long-term: Listed on the “To Students” page of the graduate school website
3. Information about events posted on other websites: Notification via Acanthus Portal

On Acanthus Portal, you can forward all notifications to your e-mail address. Configure forwarding settings for personal e-mail addresses using “Set a forwarding or emergency e-mail address” within the “Settings” menu. If you have any questions regarding Acanthus Portal, please refer to the FAQ on the “Inquiries” page on Acanthus Portal or inquire using the form.

Communication from JAIST will mostly be done via e-mail. You can use Web-Mail to check your e-mail at any time from anywhere. Please refer to the Research Center for Advanced Computing Infrastructure website regarding how to use Web-Mail.

Notifications of class cancellations, make-up classes, and sending of lecture material will also be done by e-mail. We will not assist students who are disadvantaged because they missed e-mails. Students will be informed of their e-mail and password provided by JAIST at the orientation. You can change your e-mail address using your student number provided by JAIST. Please refer to the JAIST Research Center for Advanced Computing Infrastructure website regarding how to change your e-mail address.

If you wish to forward e-mails sent to your JAIST e-mail address, the forwarding address can be set in “Preferences” on Web-Mail. If anything is unclear, please refer to the FAQ on the JAIST Research Center for Advanced Computing Infrastructure website, or make an inquiry using the inquiry form.

Also, please refer to the bulletin board in front of the office of the Educational Affairs Department and Student Affairs Department (Building 2, School of Knowledge Science, Lecture Hall) at JAIST.

5 Free Shuttle Bus

We operate a free shuttle for KU students to reduce the burden of commuting to JAIST. The shuttle bus is scheduled to operate in the 1-1 and 1-2 quarter and during the laboratory rotation held at JAIST in October and November. We will decide the type of vehicle (minibus, taxi, etc.,) the date and time of operation, and the pick-up location at KU (either in front of the Natural Science and Technology Hall, Takaramachi, or both) depending on the number of interested students. For more details, please refer to “To Students” on the graduate school website. In addition, please make sure you have your Student ID Card with you when using the shuttle bus.

6 Using Parking Lots

When commuting to the university by car, please follow traffic rules and please take good care to drive safely. As it is common for students to commute to JAIST by car, take particular care not to cause an accident.

When commuting by car to KU, please apply for a parking permit via Acanthus Portal. However, there is no guarantee that all applicants will receive a permit. Students who want parking permits for the Takaramachi and Tsuruma campuses are to

contact the Graduate School of Frontier Science Initiative. Please note that an entrance fee is required to use the Takaramachi campus parking lot.

For students who will use the Takaramachi parking lot regularly, please apply for a passcard. All other students can use the parking lot by paying the entrance fee.

Takaramachi campus pass card fee: ¥1,575 (1 month), ¥18,900 (1 year)

*There is a passcard for nights and holidays available.

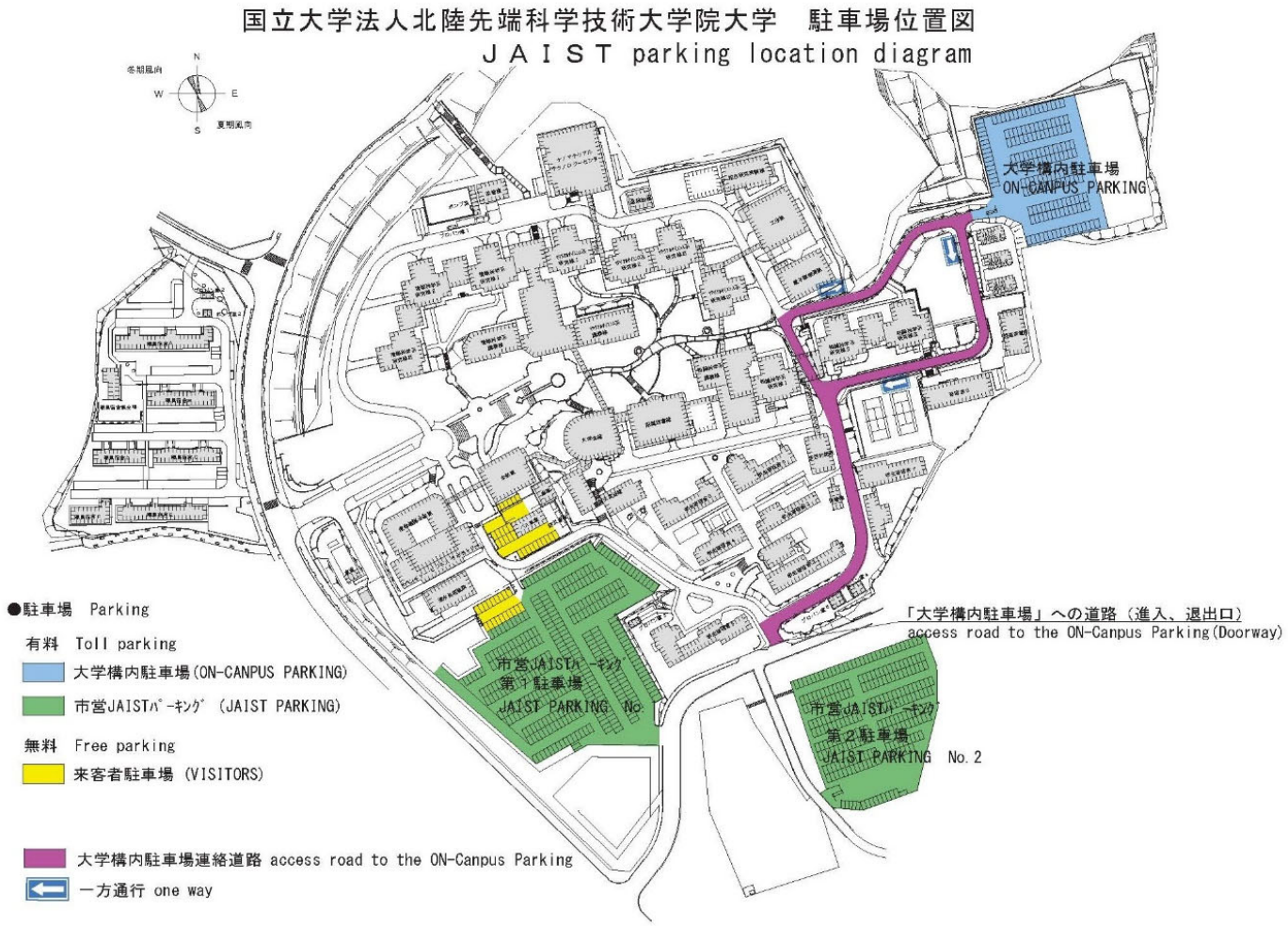
Takaramachi campus entrance fee: ¥150 (for every 30 minutes beyond the initial 30 minutes)

*Discounts may be offered. Please contact the Graduate School of Frontier Science Initiative

Students who wish to use the JAIST parking lot, please carry out the necessary procedures after reading the below.

(1) Parking lots

・On-campus parking lot (166 spaces)



(2) Fees

・Parking fee: Free (for students whose home university is Kanazawa University)

・Passcard issuance fee: ¥1,000 per card. (New cards and reissue)

7 Student ID Card

KU Student ID Cards will be distributed at orientation. In addition to being proof of identity, the card has various functions, as listed below. Please handle it with care, and do not put it close to magnets or apply strong force to the card as it contains an IC chip. Also, never lend out your card, or borrow other students' cards. If you lose or damage the card, ¥2,200 is required for reissue.

- To manage attendance for certain lectures
- As a card key to enter certain buildings
- When pre-charged and used to make payments with electronic money at the campus canteen and coop.
- When borrowing books from the library
- When taking the Annual Medical Checkup
- When issuing various certificate(s) at the automatic certificate issuing machines

In the event of loss or theft, immediately apply for the temporary suspension of the IC card on Acanthus Portal, notify the Graduate School of Frontier Science Initiative and conduct reissue procedures.

The JAIST Student ID Card will also be distributed at the orientation. The functions and points of caution are practically the same as the KU card, and ¥2,000 is required for reissue. Please refer to the JAIST website for more information.

8 Using the Self Study Area

The study space at JAIST for KU students is located in Room M1-32 on the third floor of the School of Materials Science Building 1. There are computers, printers, and scanners available, and up to three people can use the area. The University Library can also be used for self-study.

Appendix

[Kanazawa University Kakuma Campus Map]

[Kanazawa University Takaramachi, Tsuruma Campus Map]

https://www kanazawa-u.ac.jp/e/directions

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Student Affairs Division, Student Affairs Department, Kanazawa University
Kakumamachi, Kanazawa, Ishikawa Prefecture 920-1192
Tel: 076-264-5971
E-mail: s-yugo@adm.kanazawa-u.ac.jp