



Kyushu University Fact Sheet

(for University-Wide Student Exchange Program)

※The information below is subject to change.

As of November, 2023

General Information	
Mailing Address	Kyushu University #401, Center Zone 4, 744 Motooka, Nishi-ku Fukuoka City, JAPAN 819-0395
Contact Person	Inbound Yuko HAYASHI (Ms.) / exchange@jimukyushu-u.ac.jp Outbound Maaya MOTOYOSHI (Ms.) / ryugaku@jimukyushu-u.ac.jp
Website	https://www.kyushu-u.ac.jp/en/
Campus	https://www.kyushu-u.ac.jp/en/campus

Application Information (common for all programs)	
Application Procedure	<p>Kyushu University application method consists of the following two steps, nomination period by partner universities and web application period completed by the nominated students.</p> <p>International exchange students may choose one of the following programs; 1) School; 2) Graduate School; 3) JTW; 4) JLCC or 5) Q-PELS</p> <p><u>Please send a nomination sheet firstly to us by the each designated date.</u> For JTW/JLCC: January 10th, 2024 For Undergraduate/ Graduate program or Q-PELS: February 10th, 2024</p> <p>After that, nominated students are required to complete the online submission by the each designated date. (*Details will be notified after nomination.) For JTW/JLCC: February 10th, 2024 For Undergraduate/ Graduate program or Q-PELS: March 10th, 2024</p> <p>https://www.isc.kyushu-u.ac.jp/intlweb/en/admission/exchangetop</p>
Credit	2 credits are usually awarded for each course of 30 hours (2 hour session x 15), while 1 credit is awarded for each language course of 30 hours.
Courses NOT Open to Exchange Students	<p>Practical courses such as Medicine, Pharmacy, Dental Sciences are not open to exchange students.</p> <p>Courses offered by Kyushu University Business School (QBS) are open only to exchange students who are enrolled in QBS.</p>
Japanese Language Courses	<p>Japanese language courses are provided for international students enrolled at Kyushu University. Please visit the following website for more details.</p> <p>Japanese Training Courses (JTCs): For those who do not need credits for Japanese Language Courses. (*Upon successful completion, a certificate of attendance will be provided. The possibility of credit recognition can be discussed with your home university if you wish to pursue accreditation.)</p> <p>Japanese Academic Courses (JACs): For those who need credits for Japanese Language Courses.</p> <p>https://isc.kyushu-u.ac.jp/center/international/japaneselang/</p>
Transcripts Sent to Home University	Late October for Spring Admission, Late April for Fall Admission

Application Information for Schools and Graduate Schools

Eligibility	<ul style="list-style-type: none"> ▪ Applicants must have studied at least 1 year in the degree program of home university. ▪ Required GPA 3.2/4.0 *Refer to the page 5. ▪ Undergraduate students for Schools. Graduate students for Graduate Schools <p>[For those who wish to study in Japanese]</p> <ul style="list-style-type: none"> ▪ JLPT N1 <p>[For those who wish to study in English]</p> <ul style="list-style-type: none"> ▪ TOEFL iBT 79, IELTS 6.0 or equivalent <p>A score of TOEFL iBT or IELTS is preferable. However, we may accept one of the certificates listed below as an alternative.</p> <ol style="list-style-type: none"> 1) Cambridge English: First (FCE) Grade B 2) CEFR (Common European Framework of Reference for Languages): average grade of B2 3) DAAD Scholarships: Qualified Applicant (B2 or equivalent) <p>*TOEIC or EF-SET(https://www.efset.org/) Certificate is unacceptable.</p> <p>Also, if any of the following conditions apply, applicants are exempt from submitting a certificate of English proficiency:</p> <ol style="list-style-type: none"> 1) An applicant who is currently enrolled in an undergraduate/graduate program at a university in one of the countries listed below. 2) An applicant who completed high school or university education in one of the countries listed below. <p>Australia, Canada, New Zealand, South Africa, Singapore, United Kingdom, United States</p>
Website	https://www.kyushu-u.ac.jp/en/faculty/undergraduate/
Campus	Ito Campus, Ohashi Campus, Chikushi Campus or Hospital Campus
Language in Use	<p>Japanese</p> <p>※There are courses conducted in English at School of Engineering, School of Agriculture, School of Interdisciplinary Science & Innovation and all graduate school. However, please be sure to check if there are enough English courses to take before application since there are no or very limited number of courses in some study filed.</p> <p>Courses are available in English→ https://www.isc.kyushu-u.ac.jp/intlweb/en/student/english</p>
Syllabus	https://www.kyushu-u.ac.jp/en/faculty/class/learning/syllabus/department
Academic Calendar	https://www.kyushu-u.ac.jp/en/faculty/schedule
Exchange Period	1 year (April-March), 1 year (October-September), 1 Semester (April- September), 1 Semester (October-March) *QBS offers only 1 Semester (October- March)
Nomination Deadline	September 30 for Spring Admission, February 10 for Fall Admission
Application Deadline	October 15 for Spring Admission, March 10 for Fall Admission
Selection Result	Late December for Spring Admission, Late June for Fall Admission

Application Information for Japan in Today's World (JTW)

Eligibility	<ul style="list-style-type: none"> ▪ Applicants must have studied at least 1 year in the degree program of home university. ▪ Required GPA 3.2/4.0 *Refer to the page 5. ▪ Undergraduate student (Postgraduate students may apply, but should bear in mind that JTW is designed for undergraduate students, who are given priority in admission.) ▪ TOEFL iBT 79, IELTS 6.0 or equivalent <p>[NOTE] A score of TOEFL iBT or IELTS is preferable. However, we may accept one of the certificates listed below as an alternative.</p> <p>1) Cambridge English: First (FCE) Grade B 2) CEFR (Common European Framework of Reference for Languages): average grade of B2 3) DAAD Scholarships: Qualified Applicant (B2 or equivalent)</p> <p>*TOEIC or EF-SET(https://www.efset.org/) Certificate is unacceptable.</p> <p>Also, if any of the following conditions apply, applicants are exempted from submitting a certificate of English proficiency:</p> <p>1) An applicant who is currently enrolled in an undergraduate/graduate program at a university in one of the countries listed below. 2) An applicant who completed high school or university education in one of the countries listed below.</p> <p>Australia, Canada, New Zealand, South Africa, Singapore, United Kingdom, United States</p>		
Website	http://www.isc.kyushu-u.ac.jp/jtw/	Campus	Ito Campus
Number of Exchange Students	2 (Please confirm in advance)	Language in Use	English
Academic Calendar	http://www.isc.kyushu-u.ac.jp/jtw/program		
Exchange Period	1 year (October-July), 1 Semester (October-February), 1 Semester (April-July)		
Nomination Deadline	January 10 (Fall Admission), September 30 (Spring Admission)		
Application Deadline	February 10 (Fall Admission), October 15 (Spring Admission)		
Selection Result	Late April or Early May (Fall Admission), Early December (Spring Admission)		

Application Information for Japanese Language and Culture Courses (JLCC)

Eligibility	<ul style="list-style-type: none"> ▪ Applicants must have studied at least 1 year in the degree program of home university. ▪ Undergraduate students whose major is Japanese studies at home institution. ▪ Required GPA 3.2/4.0 *Refer to the page 5. ▪ JLPT N1 *JLPT N2 would be acceptable 		
Website	http://www.isc.kyushu-u.ac.jp/jlcc/en/	Campus	Ito Campus
Number of Exchange Students	2 (Please confirm in advance)	Language in Use	Japanese
Academic Calendar	http://www.isc.kyushu-u.ac.jp/jlcc/en/courses		
Exchange Period	1 year (October-August)		
Nomination Deadline	January 10		
Application Deadline	February 10		
Selection Result	Middle of April (Fall Admission)		

Application Information for Kyushu University Program for Emerging Leaders in Science (Q-PELS)	
Eligibility	<ul style="list-style-type: none"> ▪ Applicants must have studied at least 1 year in the degree program of home university. ▪ Required GPA 3.2/4.0 *Refer to the page 5. ▪ (Undergraduate students) School of Science (Graduate students) Graduate School of Science, Graduate School of Mathematics, Graduate School of Systems Life Sciences, Joint Graduate School of Mathematics for Innovation <p>[For those who wish to study in Japanese]</p> <ul style="list-style-type: none"> ▪ JLPT N2 or higher <p>[For those who wish to study in English]</p> <ul style="list-style-type: none"> ▪ TOEFL iBT 80 or higher ▪ IELTS 6.0 or higher ▪ Cambridge English with CEFR B2 level or higher ▪ Official document (certificate/letter) which proves English is the medium of instruction at their school/graduate school/faculty <p>If any of the following conditions apply, applicants are exempt from submitting a certificate of English proficiency:</p> <ol style="list-style-type: none"> 1) An applicant who is currently enrolled in an undergraduate/graduate program at a university in one of the countries listed below. 2) An applicant who completed high school or university education in one of the countries listed below. <p>Australia, Canada, New Zealand, South Africa, Singapore, United Kingdom, United States</p>
Outline of Q-PELS	Please refer to the attachment.
Campus	Ito Campus
Language in Use	Japanese/English
List of Host Labs	Please refer to the attachment.
Academic Calendar	https://www.kyushu-u.ac.jp/en/faculty/schedule
Exchange Period (Three Options)	(TYPE1) Up to 3 months: Applicants will arrange the period with the host lab. (TYPE2) 1 semester: April to August / October to February (TYPE3) 1 year: April to February / October to August
Nomination Deadline	September 30 for Spring Admission, February 10 for Fall Admission
Application Deadline	October 15 for Spring Admission, March 10 for Fall Admission
Selection Result	Late December for Spring Admission, Late June for Fall Admission

Regarding Grade Point Average (GPA)

Kyushu University uses Grade Point Average (GPA) on a 4.0 scale for academic evaluation. This scheme, as defined in the table below, is a credit-weighted average of grading points. The minimum requirement of all applicants (for School, Graduate School, JTW, JLCC and Q-PELS) is a GPA 3.2.

Grade Point	Assessment	Percentile Scale
4	Excellent	90 - 100
3	Good	80 - 89
2	Fair	70 - 79
1	Pass	60 - 69
0	Fail	0 - 59

If academic achievements are rated using a different system, applicants are requested to submit supplemental documentation which shows the scores converted into GPA on a 4.0 scale and explain how to calculate them, along with official transcript. This supplemental documentation is necessary to assess whether applicants satisfy the minimum requirement as exchange students.

Miscellaneous Information

Support Service for International Students	<p>Kyushu University offers various kind of support for international students, which is beneficial for new incoming students as well.</p> <p>Regarding Visa/Certificate of Eligibility for Status of Residence (CoE), the relevant information, how to apply for, will be provided to successful applicants.</p> <p>https://www.isc.kyushu-u.ac.jp/intlweb/en/student/visa</p> <p>*Japanese immigration law stipulates that international students with "student" visa have to spend at least ten hours in class every week.</p>
Housing	<p>On campus dormitories are available for exchange students.</p> <p>https://www.isc.kyushu-u.ac.jp/intlweb/en/student/housing</p> <p>*If applicants' enrollment period is until September/March, they are required to leave on-campus accommodation before the end of August/February due to the preparation of students coming next semester. Please check the website above for further information.</p>
Estimated Cost of Living per Month	<p>Housing and utilities: 15,000 - 50,000 yen</p> <p>Food: 30,000 yen (lunch at the school cafeteria runs about 400 yen, and students typically prepare their own breakfast and dinner at dormitories)</p> <p>Local transportation: 10,000 yen (individual spending habits may vary)</p> <p>Books and supplies: 5,000 yen (instructors typically provide reading materials in class)</p> <p>Health insurance: 2,000 yen</p> <p>Personal expenses: 20,000 yen (individual spending habits may vary)</p>
Health Insurance	<p>All international students are required to subscribe the National Health Insurance (NHI) Plan during the study period. By paying monthly premiums, subscribers are required to cover only 30% of their medical expenses.</p> <p>*We do recommend, however, that an exchange student considers buying travel insurance for emergency-related evacuation and repatriation costs, which NHI does not cover.</p>

End of Fact Sheet



Kyushu University

Instructions of Student Exchange Program Application (For prior to application) (University-Wide)

Read these instructions carefully **before** applying for Kyushu University Student Exchange Program. Firstly, please contact the international office of your home university regarding internal selection procedure as the deadline for application may differ depending on each university.

You will be asked to complete your application using the web system by the designated deadline*after you will be selected as a nominee by your home university. Therefore, please prepare all the required materials as indicated in the #7 well in advance. (The details of the website will be notified accordingly.)

*For JTW/JLCC: February 10, 2024.

*For Undergraduate/ Graduate Program and Q-PELS: March 10, 2024

Please note that we DO NOT accept applications directly from individual students. You should be selected as a nominee at your home university firstly.

1. Program *Please select one program you wish to be enrolled.	
Overall Exchange Programs	https://www.isc.kyushu-u.ac.jp/intlweb/en/admission/exchangetop
Japan in Today's World (JTW)	https://www.isc.kyushu-u.ac.jp/jtw/
Japanese Language & Culture Course (JLCC)	https://www.isc.kyushu-u.ac.jp/jlcc/en/ If applying via the Japanese embassy/consulate in your home country, please follow the instruction of the embassy/consulate.
Undergraduate School	https://www.kyushu-u.ac.jp/en/faculty/
Graduate School	https://www.kyushu-u.ac.jp/en/faculty/
Kyushu University Program for Emerging Leaders in Science (Q-PELS)	Please refer to the attachment.

2. Educational Background
Applicants must be enrolled in a formal degree program at his/her home university throughout the period of attendance at Kyushu University. (*Please make sure your expected graduation date as you will NOT be accepted as an exchange student after you graduate from your home university.)

3. Language Proficiency
As indicated in the Fact Sheet, applicants are required to have Japanese/ English language proficiency depending on its courses.

4. Financial Support
Please see the followings for possible scholarship information.

JASSO (Japan Student Services Organization)

https://www.jasso.go.jp/en/ryugaku/scholarship_j/ukeire.html

MEXT Scholarship (Japanese Government Scholarship) *Only JLCC applicants are eligible to apply.

https://www.mext.go.jp/a_menu/koutou/ryugaku/06032818.htm

You may apply for MEXT scholarship if you wish to join the JLCC program.

Please note that being nominated by Kyushu University does NOT necessarily mean that you will receive the scholarship; the final decision to be granted is made by the scholarship-sponsoring organization. We may not be able to notify you before your arrival to Japan about the result due to the procedure of the organization.

You are requested to show your intention to apply for the scholarship through the web application system.

If you have been granted with another scholarship, please make sure to notify us through the international office of your university in order to avoid the conflict of being a recipient of the JASSO or MEXT scholarship.

5. Credits and Course List

Please refer to the information below well in advance.

(If you are a graduate student and intend to do research only, you do not have to fill out the course list.)

Course List	List up names of courses you wish to take at Kyushu University in order of preference prior to the web application. You must select courses to meet 14 credits or more each semester under Japanese Immigration Law. (More than 20 credits are not recommended.) <u>Please make sure to select courses from the undergraduate/graduate school you are applying for.</u> Please note that your course request is not always accepted.
Course Reference (JTW)	https://isc.kyushu-u.ac.jp/jtw/program
Course Reference (JLCC)	https://isc.kyushu-u.ac.jp/jlcc/courses
Course Reference in English (Schools/Graduate Schools)	https://www.kyushu-u.ac.jp/en/faculty/class/learning/syllabus/department https://www.isc.kyushu-u.ac.jp/intlweb/en/student/english
Course Reference in Japanese (Schools/Graduate Schools)	https://www.kyushu-u.ac.jp/ja/faculty/class/learning/syllabus/department

6. Research

Applicants who wish to do research in a laboratory MUST specify this section. Search instructors:

https://hyoka.ofc.kyushu-u.ac.jp/search/index_e.html

Field of Study	Specify your field of study.
Theme of Research	Specify the theme of your research you wish to conduct at Kyushu University. Please note that the detailed descriptions are preferable in order to find a prospective academic supervisor.
Names of Preferred Supervisors at Kyushu University	Make sure to list up 3 instructors in order of preference based on your field of study. Please note that requests of supervisors are not always accepted.

7. Required Documents through Online Submission

<input type="checkbox"/>	Academic Transcript	<p>All applicants must submit.</p> <p>*Regarding “Academic Transcript”, please be sure to refer to the page 4 in the “Kyushu University Fact Sheet” as you may be requested to submit the supplemental documentation to convert your score to 4.0 scale.</p>
<input type="checkbox"/>	Letter of Recommendation (signed by handwriting)	
<input type="checkbox"/>	Passport Copy	
<input type="checkbox"/>	Study Plan	<p>Applicants who wish to earn credits must submit. (*Not applicable to JTW applicants.)</p> <p>You should describe or explain the following 2 themes either in English or Japanese in accordance with the language you will use at Kyushu;</p> <ol style="list-style-type: none"> 1) Your major and describe briefly what you have studied in class at home university. (200 - 250 words in English/ 400 - 450 characters in Japanese) 2) Your purpose and particular academic goals for Exchange Programs at Kyushu University. (200 - 250 words in English/ 400 - 450 characters in Japanese) <p>Please note that the description should be minutely and specifically, or you might not be selected.</p>
<input type="checkbox"/>	Research Plan	<p>Applicants who wish to conduct research must submit.</p> <p>You should describe or explain the following 2 themes either in English or Japanese in accordance with the language you will use at Kyushu;</p> <ol style="list-style-type: none"> 1) Your current research conducted at your home university. (200 - 250 words in English/ 400 - 450 characters in Japanese) 2) Your field of study and describe the theme of your research that you wish to implement at Kyushu. (200 - 250 words in English/ 400 - 450 characters in Japanese) <p>Please note that the description should be minutely and specifically, or you might not be selected.</p>
<input type="checkbox"/>	Copy of Diploma	<p>Post graduate students must submit.</p> <p>*If you cannot submit the Diploma for some reasons, such as due to the educational system, please submit the certificate which proves you got the bachelor’s/ master’s degree.</p>
<input type="checkbox"/>	Language Proficiency Certificate	<p>Non-native English speakers who wish to study in English must submit a score of TOEFL iBT or IELTS.</p> <p>Applicants who wish to study in Japanese must submit Japanese Language Proficiency Test (JLPT).</p>
<input type="checkbox"/>	2 nd Letter of Recommendation (signed by handwriting)	<p>Only JTW applicants must submit 2 recommendation letters in total from different instructors or academic advisors at home institution.</p>
<input type="checkbox"/>	Essay titled “Why JTW for Me and My Goals”	<p>Only JTW applicants must submit. Explain in 800-1000 words why you wish to participate in JTW and what you would like to achieve through the program participation.</p>

<input type="checkbox"/>	Independent Study Project Proposal (optional)	Applicable JTW applicants must submit. Describe project focus, objective, methodology, any progress to date. https://www.isc.kyushu-u.ac.jp/jtw/apply
<input type="checkbox"/>	Advanced Laboratory Research Project Proposal (optional)	Applicable JTW applicants must submit. Describe project focus, objective, methodology, any progress to date. https://www.isc.kyushu-u.ac.jp/jtw/apply
Please note that all required documents should be written in English or Japanese. Please attach a translated version into English or Japanese if a document written in a language other than English or Japanese.		

8. Reasonable Accommodations for Students with Disabilities

Kyushu University seeks to ensure that all members of Kyushu University respect the rights of people with disabilities, and accepts the request for reasonable accommodations concerning classes, exams, and daily life for students with disabilities. If you are currently receiving reasonable accommodations from your home university because of disabilities, please request for reasonable accommodations through online application form. *Kyushu University might not be able to meet all your requests.

9. Privacy Policy

Please click the following link to check Kyushu University's privacy policy before completing your application.
<https://www.kyushu-u.ac.jp/en/website/privacypolicy>

Your consent will be requested for two items: the sending of your transcript records issued by Kyushu University to your home university and the sharing of information about your daily life at Kyushu University with your home university for administrative and safety purposes.

End of Instructions

Introduction

Kyushu University is recognized as a leading science university internationally.

Kyushu University's Program for Emerging Leaders in Science (Q-PELS) is a research-oriented student exchange program for graduate and undergraduate students.

Q-PELS provides students with hands-on experience at a wide range of top-level laboratories* to enrich their knowledge and skills. We believe students from our prestigious partner universities can make a future research hub by collaborating and networking in this program.

*Please check the attached list.

Eligibility

Q-PELS applicants must meet the following requirements.

- Applicants must be full-time registered degree-seeking students at their home institution with a student exchange agreement with Kyushu University.
- Applicants must be in excellent academic performance at their home institutions.
- Applicants must be reminded as full-time registered degree-seeking students at their home institution after completing this program.
(Graduation/completion of a regular course of study at their home universities during participation in this program is not acceptable.)
- Applicants must meet other requirements by the host laboratory or host faculty member.

Language Requirements

Q-PELS applicants must meet one of the following language requirements.

<For English proficiency>

- TOEFL iBT 80 or higher
- IELTS 6.0 or higher
- Cambridge English with CEFR B2 level or higher
- Official document (certificate/letter) which proves English is the medium of instruction at their school/graduate school/faculty.

<For Japanese Proficiency>

- JLPT N2 or higher

Student Workload

Category Name	TYPE1* 32days - 3months	TYPE2 Semester (15 weeks)	TYPE3 Full-year (30 weeks)
Period	June.2024- Sep.2025	Oct.2024- Feb.2025	Oct.2024- Aug.2025
Contact Hours (i.e. hours you spend in the assigned Lab)	Arrange with their host labs /faculty member	420	840
Supervised Study (Meeting with their supervisor)		20	40
Independent research hours		210	420
Tutorial (Supplementary advised from senior students)		30	60
Preparation hours		40	80
Other Laboratory Activities		30	60
Total Student Workload		N/A	750
Student Workload ECTS Equivalent (25hrs 1ECTS)	N/A	30	60

ECT: European Credit Transfer and Accumulation System

***TYPE1: TYPE 1 applicants will arrange with the host lab to determine the length of study abroad, which will be between 32 days and 3 months.**

<Mandatory Assignment>

- Poster presentation (full-year student)
- Oral presentation (at the end of the exchange term)
- Other assignments as assigned by your host laboratory or faculty member

*Numbers indicate hours per semester or a full year. On average, daily contact hours will be 5.6 hours. The above ECTS-compliant table can be referred to facilitate credit transfer between Kyushu University and partner institutions.

Note:

- The ECT equivalent will be awarded based on the 'Total Student Workload' when performances are

approved by the committee members.

- Q-PELS students are not required to complete a thesis; however, the activities during the program could be a part of a master/doctoral thesis with permission from an academic advisor)
- Other than Contact hours are estimated that vary by laboratory.

Student Status

- 32days – 3 months (No credits at KU)

<Both Graduate and Undergraduate student> Trainee Student or Short-term Visiting Student

- Semester/Full-year

<Undergraduate student> Special Auditing Student

<Graduate Student> Special Research Student or Special Auditing Student

Note:

- Special Auditing Students are allowed to take other credited courses at KU.

(Courses conducted in English) <https://www.isc.kyushu-u.ac.jp/intlweb/en/student/english>

(Japanese classes for Undergraduate students) <https://isc.kyushu-u.ac.jp/center/jacs/>

(JTW core courses) <https://isc.kyushu-u.ac.jp/jtw/nonjtw>

Completion

Students who complete the mandatory assignments and are approved by the program's host school/graduate school will be issued a Certificate of Completion signed by the dean of the host school.

Kyushu University Program for Emerging Leaders in Science (Q-PELS)_AY2024

Course code	Category			Course		Host Laboratory Information			Research Description	Pre-Requisites	Maximum number of participants per period	Keywords
	TYPE1 32days-3months	TYPE2 Semester Fall 2024	TYPE3 Full-year Fall 2024-Spring 2025	Faculty Member(s)		School/Graduate school	Department					
				Surname	First Name							
SC24001	○	○	-	○	○	Science	Physics	FUKUDA	Jun-ichi	Theoretical study of soft matter physics (liquid crystals, polymers, glasses, supercooled liquids, etc.) and biophysics. More information can be found at https://www.sci.kyushu-u.ac.jp/e/departments/phys/labo/condensed.html .	1	Soft Matter Physics Liquid Crystal Polymer Glass Supercooled liquid biophysics
								MATSUI	Jun			
								TARAMA	Mitsusuke			
SC24002	○	○	-	○	○	Science	Physics	Inagaki	Shio	Physics of granular matter has been a main research topic in our research group. A collection of dissipative solid particles (granular matter) shows various intriguing phenomena such as size segregation, convective flow, pattern formation, flow clogging, non-Gaussian statistics, etc. We are striving to reveal the fundamental physics of granular behaviors. We mainly work on experiments but also numerical simulations such as Discrete Element Method.	2	Non-equilibrium statistical physics Complex systems Granular physics Molecular dynamics simulation Experiments
SC24003	○	○	-	○	○	Science	Physics	Tojo	Junji	Our laboratory carries out a wide range of the experimental particle physics programs. Our focus is especially to search for a new physics beyond the Standard Model of particle physics in high-energy frontier experiments and in several experiments using muon and neutron. Students have opportunities to join those programs.	1	Experimental particle physics
SC24004	○	○	○	○	○	Science	Chemistry	Ohba	Masaaki	The Ohba Lab (Physical Coordination Chemistry) focuses on functions and properties of the "space" formed by assembled metal complexes. Our interests are in novel properties based on magnetic, dielectric and luminescence properties incorporated in the framework of space, and functions based on enzyme-metal complex composites. We develop research in the interdisciplinary field of chemistry, physics, and biology with a focus on coordination chemistry.	1	Coordination Chemistry Metal-organic framework (MOF) Metal-organic polyhedra (MOP) Functional Material Metal complex-enzyme composite
								Ohtani	Ryo			
								LeOuay	Benjamin			
SC24005	○	○	○	○	○	Science	Chemistry	Terasaki	Akira	Physical chemistry of atomic and molecular clusters by means of mass spectrometry and laser spectroscopy. Please visit http://www.scc.kyushu-u.ac.jp/quantum/index_e.php for further information.	2	Physical chemistry Nanoscience Atoms, molecules, and clusters Laser spectroscopy Mass spectrometry Reaction Kinetics
								Horio	Takuya			
								Arakawa	Masashi			

Kyushu University Program for Emerging Leaders in Science (Q-PELS)_AY2024

Course code	Category			Course		Host Laboratory Information			Research Description	Pre-Requisites	Maximum number of participants per period	Keywords
	TYPE1 32days-3months	TYPE2 Semester Fall 2024	TYPE3 Full-year Fall 2024-Spring 2025	Faculty Member(s)		School/Graduate school	Department					
				Surname	First Name							
SC24006	○	○	○		-		Hori	Yuichiro	In our laboratory, we are developing chemical biology techniques to label and visualize proteins with synthetic fluorescent molecules by devising and applying chemical principles. In living cells, countless biomolecules exist, dynamically changing their localization and controlling cellular events by performing the biomolecular functions in a subcellular region where they are needed. Visualization of the movement of these biomolecules provides important information to elucidate the physiological functions they control. We are developing original technology for fluorescent labeling of proteins to reveal how proteins move in living cells and regulate biological phenomena. Furthermore, we aim to elucidate biological phenomena regulated by nucleic acids, glycans, and extracellular vesicles in addition to proteins, and to control functions of biomolecules at will by making full use of our protein labeling technology.	Knowledge of chemistry and biology	1	Chemical Biology Fluorescence imaging Protein chemistry Synthetic fluorophores
							Adachi	Junya				
SC24007	○	○	○		-		Matsushima	Ayami	We have a strong interest in the molecular mechanisms of ligand-receptor interaction. Our main research targets are nuclear receptors which precisely regulate gene transcription. We focus on all nuclear receptors to elucidate their activation mechanisms comprehensively. Binding affinity is analyzed in vitro by many techniques, and transcription activity is measured by reporter gene assays using cultured cells.	Comfortable with laboratory animal care (mouse)	1	Nuclear receptor estrogen transcription endocrine-disrupting chemical opioid peptide precursor
SC24008	○	○	○		-		Yoshikawa	Akimasa	Various plasma phenomena occurring in "Geospace," the space around the Earth, and the associated space weather phenomena' effects on the Earth are studied using plasma physics, magnetospheric physics, and ionospheric physics. This course is intended for students who are interested in the solar-terrestrial environment and in the future application of space physics to space weather prediction.	The student must have a background in basic physics such as electromagnetism and mechanics, and an interest in space physics.	2	Space weather Space plasma physics Space and Earth electromagnetism Global electromagnetic fields observation
SC24009	○	○	○		○		Liu	Huixin	We study the upper atmosphere (thermosphere/ionosphere) of the Earth, Mars and Venus and their response to solar forcing, and lower atmosphere forcing via atmospheric waves and chemical processes. Ground/Satellite observations, along with model simulations are used to explore the physical and chemical coupling processes between various regions of the atmosphere.	Programming ability with Python or Matlab	3	space weather Earth and planetary atmosphere Earth and planetary ionosphere Earth and planetary thermosphere satellite observation model simulation

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				Surname	First Name							
SC24010	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Undergraduate	Graduate	Hamamura	Natsuko	System Life Science/ Science	Biological Science/Dept. of Biology	Lab work experience (preferably in the areas of microbiology, molecular biology, and/or geochemical analyses) and knowledge of microbiology.	1	bioremediation microbial metal transformation microbial electrochemistry microbial ecology environmental microbiology geomicrobiology
SC24011	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			Eriko	Sasaki	Science	Biology	Due to rapid industrial development, discharge of a wide range of chemicals into the environment has increased dramatically in recent years. Microorganisms inhabit almost every environment on the Earth's surface and play important roles in biogeochemical processes and ecosystem function. Our overall research interest is to understand the complex interactions of microbial community functions and geochemical processes, both of which are influencing each other co-dependently to shape the ecosystem. We are working with natural or anthropogenically-impacted systems to study function and diversity of microbial community in context of ecosystem function, interaction with environmental factors, and physiochemical changes. Interdisciplinary knowledge and research efforts are necessary to link genomics, ecology, and geochemical processes associated with microbial functions in the environments. Topics: 1. Environmental microbiology. 2. Geomicrobiology of metalloids. 3. Microbe-mineral interactions. 3. Microbial ecology in the extreme environment. Our research focuses on the genetic basis of natural variation, such as flowering phenology and genome defense systems, mainly in Europe populations of <i>Arabidopsis thaliana</i> . We aim to understand how plants have adapted to various environmental conditions using genomics, quantitative genetics, and molecular biology approaches. Website (https://sites.google.com/View/enkosasaki-research/home-en)	2	Evolution Plants Quantitative genetics Epigenetics
SC24012	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			Arakaki	Seiji	Science/ System Life Science	Biology/ System Life Science	Our laboratory, the Amakusa Marine Biological Laboratory, is located in western Kyushu (far away from the main campus). The AMBL aims at elucidating how a multitude of species can coexist and maintain ecological assemblages under different environmental conditions and evolutionary backgrounds. (Website) http://amb1-ku.jp/	1	Marine Community Ecology Coastal Ecosystems
MA24001	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			Masato	Tsuji	Mathematics	Mathematics	I am interested in dynamical systems, which describes deterministic time evolutions that appear in many fields of sciences. More specifically I am studying smooth ergodic theory which describes long-time statistical properties of dynamical systems generated by smooth vector fields or smooth maps.	2	Dynamical System Ergodic Theory Chaos Fractal Strange Attractor Fractal dimension

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MA24002	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Kajiwara Kenji	Mathematics	Mathematics	Differential geometry of smooth/discrete curves and surfaces, integrable systems, geometric shape generation. Applications to architecture design and industrial design.	Knowledge of fundamental calculus, linear algebra, preferably, geometry of curves and surfaces.	1	Curves and Surfaces Integrable Systems Geometric Shape Generation Differential Geometry	
MA24003	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Kaji Shizuo	Mathematics	Mathematics	Professor Shizuo KAJI works in the field of applied topology. His research interests include topological data analysis, geometric models of graphs and other discrete structures for machine learning, and 3D shape analysis and design. Please visit his web page at https://www.skaji.org for more information.	Knowledge of undergraduate mathematics such as linear algebra, calculus, point set topology, and metric space	2	Topological Data Analysis Geometric Representation Learning Geometric Shape Design Applied Topology	
MA24004	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	CESANA Pierluigi	Mathematics	Mathematics	My Lab focusses on two main lines: 1) (more classical) Partial Differential Equations and Continuum Mechanical models for smart materials. This includes Shape Memory Alloys, Liquid crystals and more. Some of this work in collaboration with Caltech and Oxford groups. See: https://arxiv.org/abs/2207.02511 https://arxiv.org/abs/1501.06859 2) Artificial Intelligence and Machine Learning methods for the accelerated design of molecules and materials for targeted applications in electronics, semiconductors, etc. See: https://linkinghub.elsevier.com/retrieve/pii/S2666827022000093	Flexible as various projects will be available based on each student's background.	2	Partial Differential Equations Plasticity Dislocation Disclination Liquid crystals Continuum Mechanics Calculus of Variations Cellular Automata Machine Learning Quantum chemistry Density Functional Theory	
MA24005	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Hiroshima Fumio	Mathematics	Mathematics	I am studying the spectral analysis of operators on an infinite dimensional space. Especially, from the mathematical standpoint, we investigate the quantum field theory on pseudo-Riemannian manifolds by using operator theory, micro-local analysis, theory of one-parameter semigroup, stochastic analysis, functional integral.	Knowledge of measure theory, linear algebra, general topology	1	quantum field theory path integral functional analysis spectral analysis measure theory mathematical physics	
MA24006	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ochiai Hiroyuki	Mathematics	Mathematics	Professor Ochiai works on Algebraic Analysis, including Special Functions, Hypergeometric functions, Representation Theory of Lie groups and Lie algebra, D-modules	Calculus and Linear algebra are necessary.	2	Algebraic Analysis D-module hypergeometric function spherical function Hecke algebra Lie group	

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MA24007	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Undergraduate	Graduate	Nguyen	Dinh Hoa	Mathematics	Mathematics	<p>Professor Nguyen's research is on the modeling, optimization and control towards clean and autonomous power and energy systems. His particular interests are on distributed control and optimization; multi-agent systems; integration of renewable and distributed energy resources; stability, robustness and resiliency of smart grids. For more details, please see: https://sites.google.com/site/dinhhoanguyeniste</p>	1	Control Theory Smart Grid Optimization Multi-Agent System Renewable and Distributed Energy Resources Artificial Intelligence
MA24008	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			Matsue	Kaname	Mathematics	Mathematics	<p>Research interests in this Lab are mainly twofolds. 1: Dynamical Systems. Based on (ordinary) differential equations, various complex, singular behavior are studied. Recently, blow-up solutions and singular perturbation problems are mainly studied. 2: Numerical Analysis with application to dynamical systems. Singular nature in dynamical systems is also studied from the viewpoint of numerics. Numerical difficulties in these problems are our issues here. As an application, the following topic is also studied. 3: Combustion.</p>	1	Dynamical Systems Numerical Analysis Singular Perturbation, Blow-up Complex Systems involving Combustion
MA24009	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			Fukumoto	Yasuhide	Mathematics	Mathematics	<p>This course is to conduct a mathematical modeling of fluid phenomena in terms of partial differential equations, an asymptotic analysis for getting an essential information of their solution and a numerical calculation of the full solution, experience, with its feedback to the phenomena. Specific targets are vortex dynamics, stability of fluid motions, magnetohydrodynamics, flows through porous media, flood of rivers, combustion.</p>	2	Fluid mechanics Hamiltonian mechanics Hydrodynamic stability Vortex motion Magnetohydrodynamics Combustion
MI24001	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			Ta	Ton	Joint Graduate School of Mathematics for innovation	Agro-Environmental Sciences	<p>Mathematical Modeling Lab website: http://www.agr.kyushu-u.ac.jp/lab/ta/ We study various real-world phenomena by using stochastic ordinary/partial differential equations, statistical models, or deep learning. Some topics include Fish Schooling, Forest Ecosystem, Weather Prediction.</p>	2	Stochastic differential equations Fish schooling Deep learning Applied statistics Forest ecosystem Stochastic evolution equations
SL24001	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			Kenshi	Hayashi	System Life Science	Electronics	<p>Hayashi Lab/Organic Electronics Lab is focused on bio-mimetic/organic material devices, which detect odor information. Especially, odor imaging device for robotic application based on two dimensional plasmonic materials and molecular selective materials, which realize high-sensitive, high-speed and high throughput visualize spatiotemporal changes of chemical space. Fully inkjet printed sensor devices are also researched.</p>	2	gas sensor plasmonic device nano material IoT application sensor robot application

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SL24002	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			System Life Science	System Life Science	Iramina Keiji	Iramina lab is focused on neuroimaging, Biomedical engineering, and Neuroengineering. We study in the fields of the measurements of brain function by EEG and NIRS, the development of measurement technology. The elucidation of the mechanism of brain function is one of foundations of life science, and it can be applied to almost all the fields. Have a deep understanding of brain information processing, and apply the research results to fields of life science, medicine, welfare and education is the purpose of our study.		4	Neuroimaging Neuroengineering Biomedical engineering
SL24003	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			Systems Life Sciences	Systems Life Sciences	Lauwereyns Johan	The Lauwereyns Lab hosts research in the areas of cognitive science and bioethics, particularly with respect to meta-decision-making and cognitive biases. We typically use eye-tracking, biometrics and behavioral measurements in our research.	One of the following is required: 1) have studied experimental psychology or cognitive science; 2) have studied bioethics; 3) have good programming skills (Python); or 4) have good statistical skills (particularly ANOVA).	2	Bioethics Cognitive biases Meta-decision-making
SL24004	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			Systems Life Sciences	Systems Life Sciences	Arata Jumppei	Our research aims at new medical applications based on Robotic technology. Robotic technology includes many elements – mechanism, sensor, control, system integration and etc. We study about these elements to realize further effective medical applications. Visit our website for more details: https://amd.mech.kyushu-u.ac.jp/	Fluent English conversation skills. Basic knowledge of Mechanical Engineering (Mathematics, Mechanics, Mechanical Design)	1	Robotics Medical Application Surgical robots Rehabilitation robots Bio sensors Brain-Machine Interface
SL24005	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			Systems Life Sciences	Systems Life Sciences	Katayama Yoshiki Mori Takeshi Kishimura Akihito	We are trying to create a new concept of biomedical technology by gathering all the related knowledge. We are a heterogeneous group composed of chemists, molecular biologists, pharmacologists, medical scientists, and veterinarians. - "Human Orthogonal Enzymes" for High-Quality Diagnosis - "Re-directional Pharmacaceutics" - Development of Gene-Engineered Macrophage Drugs - Bio-invisible Polymers - "Prevention Medicine" by Long-Lasting DDS - Bio-polyon complexes for Cellular Mimetics & Therapy - Efficient Induction of Immune tolerance (Website) https://sites.google.com/view/katayamalab	Knowledge of basic chemistry or basic life sciences.	1	Biomaterials/Bioengineering Analytical Chemistry Immunology Formulation Technology Macromolecular/Supramolecular Science Artificial Cells