

2017

APPLICANT GUIDELINES for

The International Course on Systems Life Sciences in
THE GRADUATE SCHOOL OF SYSTEMS LIFE SCIENCES,
KYUSHU UNIVERSITY

for applicants who wish to enter as 3rd year students

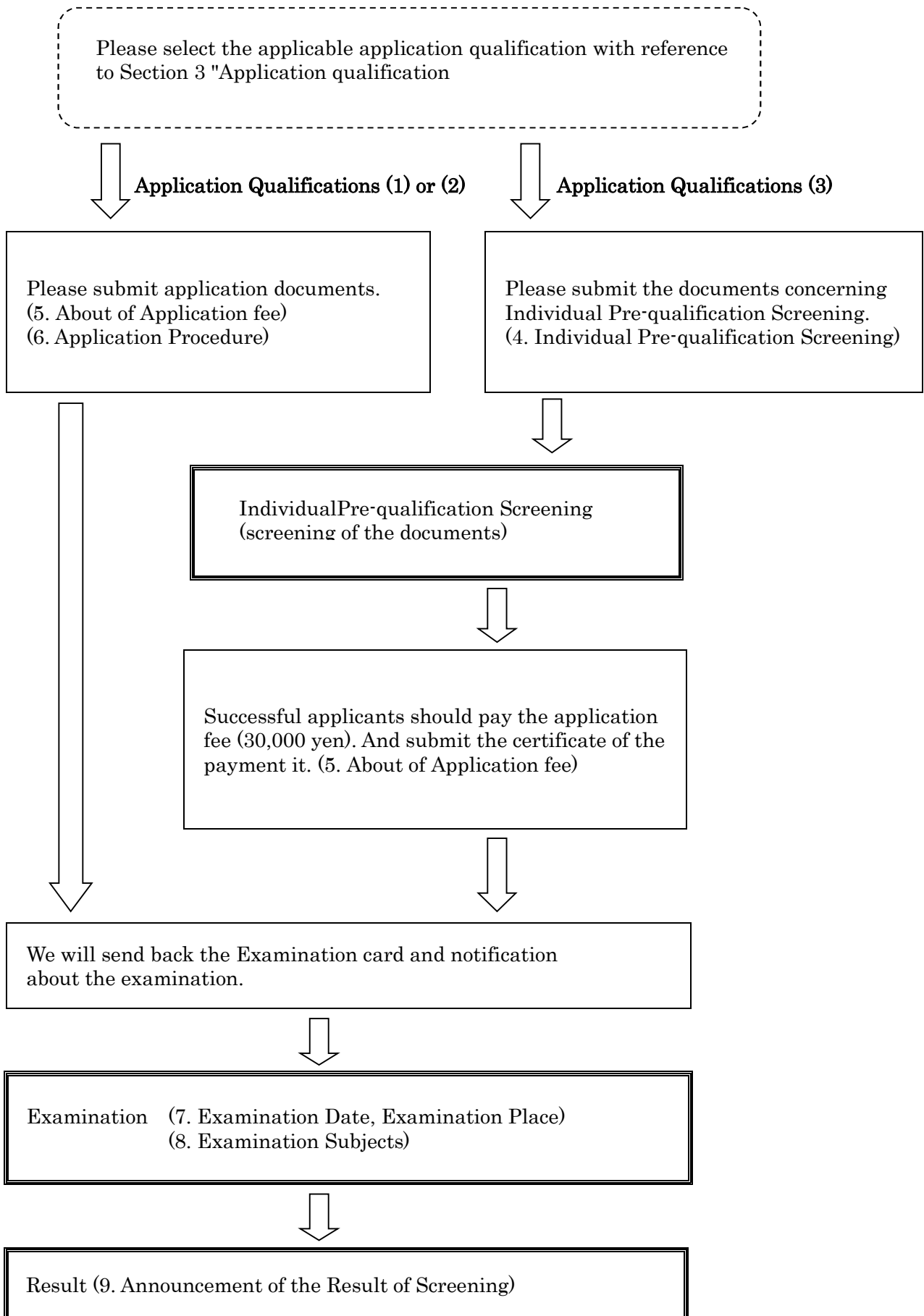
(Academic Year from October, 2017)

February, 2017



九州大学大学院システム生命科学府

Flow of application procedure.



1. Admission Policy

The International Master's Program in Systems Life Sciences and the International Doctoral Program in Systems Life Sciences offer students the opportunity to become global leaders in research and education, and top-class professionals with expertise in the fields of advanced life sciences. These Programs are based on the innovative concept of Systems Life Sciences, which represents interdisciplinary education and research involving biology, agriculture, medicine, informatics and engineering, and positions itself at the forefront in the current era of rapidly developing life sciences.

The Graduate School of Systems Life Sciences was established in April 2003 as the University's first interdisciplinary graduate school for life sciences, and was enabled by the Graduate School/Faculty system that characterizes the organization of Kyushu University. The life sciences have developed extensively in the context of many evolutionary events, such as the rapid accumulation of genome data and the accelerated progress in biological and biomedical measurement and imaging techniques. A seamless and highly efficient form of collaboration among specialists in biology, informatics and engineering will be essential to the pursuit of the life sciences in the coming decades. Recognizing this need, the Graduate School of Systems Life Sciences was organized to establish a globally competitive education/research core by drawing from the faculties of many disciplines, including informatics, engineering, agriculture, biology and medicine. Participating academic staff members come from six faculties and one research institute at Kyushu University. The graduate school has a single Department of Systems Life Sciences to enhance interdisciplinary activities. It provides a five-year doctoral course to nurture global leaders of research and education in systems life sciences and top-caliber professionals with combined expertise in biology and informatics, or biology and engineering. There is also an option for a two-year master's program. For applicants who have obtained or will obtain the Master's degree, another entrance examination will be offered for entry as a third year student.

The Graduate School represents a single department composed of the five divisions of Bioinformatics, Life Engineering, Medical Molecular Cell Biology, Molecular Life Sciences and Biological Sciences. This makes the school an advanced education hub that covers the entire field of biology, ranging from the study of molecules to the study of populations and ecosystems.

Our Graduate School is currently establishing its status as a hub for all graduate schools involved in life sciences at Kyushu University, and as a global education/research core for the life sciences.

The International Doctoral Program in Systems Life Sciences encourages students of all nations to take on the future challenges of this rapidly developing field. The sought-after type of student is a student who...

- ...wishes to challenge the cutting-edge fields of the life sciences.
- ...has the flexibility to promote interdisciplinary development.
- ...has robust motivation, and is eager to pursue the quest for truth.
- ...has a good basic knowledge of the principles and ethics of the life sciences.

2. Admission Capacity: Several students

3. Qualifications for Application

- (1) Persons who hold a Master's degree or a Professional degree, or who earn one by the end of September, 2017 in Japan.
- (2) Persons who have obtained, or will obtain, a Master's degree or a Professional degree by the end of September, 2017 in foreign countries.

(3) Persons who have been recognized by our Graduate School, based on an individual screening of the requirements for admission to our Graduate School, as having academic abilities equal to or better than students who have obtained a Master's degree or a Professional degree. And those who reach 24 years old at the time of enrollment.

* Notes concerning application

- a) Applicants who intend to apply in accordance with qualifications (3) must participate in an individual evaluation of their abilities in relation to the requirements for admission in advance.
- b) For details of the Graduate School of Systems Life Sciences, Kyushu University, please see the last table and the following website: <http://www.sls.kyushu-u.ac.jp/en/>
- c) Prior to the application, contact your preferred supervising professor at the Graduate School of Systems Life Sciences, Kyushu University.

4. Individual Pre-qualification Screening

(1) Application method

Persons who intend to apply in accordance with qualifications for application (2) & (3) should submit all of the following documents to the Academic Affairs Section, Graduate School of Systems of Life Sciences, Kyushu University from March 6 (Mon), 2017 to March 17 (Fri), 2017.

Prescribed forms (Form-1,2,3,4 and 5) can be downloaded at the following website:

<http://www.sls.kyushu-u.ac.jp/en/application.html>

1. Application for Recognition of Academic Requirements. (Form-5)
2. Application form for admission.(Form-1)
3. Curriculum vitae. (Form-2)
4. Collation card/Examination card. (Form-3)
5. Research Record. (Form-4)
6. Official Academic Transcript to be issued by the university from which you will graduate or have graduated most recently.
7. Graduation Certificate or Statement that confirms expected graduation.
8. Recommendation.
9. A copy of master's thesis or documents equivalent to master's thesis.
10. A copy of Certificate of Japanese ability (if applicable).
11. Synthesized English qualifying examination score certificate : Submit Official Score Certificate of TOEIC, or Examinee Score Record of TOEFL, or the transcript of results of IELTS, or the certifying statement of results of Cambridge ESOL Examination (FCE, CAE or CPE). (Copy is accepted.)

(2) Mailing address for application form and related documents

Academic Affairs Section, Graduate School of Systems Life Sciences, Kyushu University

744 Motooka Nishi-ku Fukuoka 819-0395 JAPAN

TEL; +81-(0)92-802-4033 E-mail; sls-jimu@sci.kyushu-u.ac.jp

(3) Announcement of the Result of Individual Pre-qualification Screening

You will be informed of the result of the evaluation by March 31 (Fri), 2017. Successful applicants should pay the application fee (30,000 yen) and submit the certificate of the payment it to the Academic Affairs Section, Graduate School of Systems Life Sciences.

5. About of Application fee (※This is not required for applicants those who are MEXT (Ministry of Education, Culture, Sports, Science, and Technology) Scholarship Students.)

Please choose the one type from three ways below. Screening fee have to be paid from April 10 (Mon), 2017 to April 28 (Fri), 2017.

(1) Payment by Telegraphic Transfer

- a. Please fill your full name and code 3SL when you pay. A copy of receipt for transfer of the screening fee should be attached with the necessary documents for application.
- b. Please transfer in Japanese yen.
- c. Please cover all the commission costs when you transfer.

d-1. Beneficiary:

Name	Kyushu University
Address	6-10-1 Hakozaki, Higashi-ku, Fukuoka 812-8581
Nationality	JAPAN

d-2. Beneficiary's Bank:

Name	SUMITOMO MITSUI BANKING CORPORATION
Branch Name	FUKUOKA BRANCH
Address	1-1-1 Hakataekimae, Hakata-ku, Fukuoka 812-0011, JAPAN
A/C No.	7119240
Swift Code	SMBCJPJT

(2) Payment by Credit Cards

- a. Payment can be made through Visa, Master Card, JCB, American Express, Union Pay, Alipay, and UC (available only in Japan).
- b. Credit card payment can be done directly at <https://e-shiharai.net/english/>
- c. Please refer to “How to make the Payment for the Application Fee by Credit Card, Union Pay, and Alipay.” for details about paying with a credit card.

(3) Payment at Convenience Stores (available only in Japan)

- a. Payment can be made at Seven Eleven, Lawson , Family Mart, and Circle K Sunkus.
- b. Please refer to “How to make the Payment for the Application Fee by Credit Card, Union Pay, and Alipay.” for details about paying with a credit card.

6. Application Procedure

Applicants can submit or mail their application, as specified in section 4, to the Academic Affairs Section, Graduate School of Systems of Life Sciences, Kyushu University, addressed to the chairperson of the Division of their first choice, from April 17 (Mon), 2017 to April 28 (Fri), 2017.

(1) Documents to be submitted

1. Application form for admission.(Form-1)
2. Curriculum vitae. (Form-2)
3. Collation card/Examination card. (Form-3)
4. Research Record. (Form-4)
5. Official Academic Transcript to be issued by the university from which you will graduate or have graduated most recently.
6. Graduation Certificate or Statement that confirms expected graduation.
7. Recommendation.
8. A copy of master's thesis or documents equivalent to master's thesis.
9. A copy of Certificate of Japanese ability (if applicable).
10. Synthesized English qualifying examination score certificate : Submit Official Score Certificate of TOEIC, or Examinee Score Record of TOEFL, or the transcript of results of IELTS, or the certifying statement of results of Cambridge ESOL Examination (FCE, CAE or CPE). (Copy is accepted.)
11. Certificate of the payment of Application fee (30,000 yen)
(A copy of receipt for transfer of the application fee, or the printed "Result" page of the receipt of payment of Application fee)

*Notes concerning documents

- (1) Prescribed forms (Form-1,2,3 and 4) can be downloaded at the following website:
<http://www.sls.kyushu-u.ac.jp/en/application.html>
- (2) Take the TOEIC TEST, or, alternatively, either the TOEFL-iBT, TOEFL-CBT, or TOEFL-PBT test. Persons who cannot submit Synthesized English qualifying examination score certificates when applying must indicate the date on which they expect to take the Examination. And bring the original of each certificate on the day of the subject examination.
- (3) Documents cannot be replaced, nor can a Screening fee be returned, after the application form is accepted.
- (4) Do not use erasable marking pens such as “Pilot Frixion Ball”.
- (5) MEXT (Ministry of Education, Culture, Sports, Science, and Technology) Scholarship Students are able to apply via documents that are submitted through MEXT instead of the prescribed documents, excluding the application form. Moreover, research students of ISEE can use documents they previously submitted to Academic Affairs Section, Graduate School of Systems Life Sciences.

(2) Mailing address for application form and related documents

Academic Affairs Section, Graduate School of Systems Life Sciences, Kyushu University
744 Motooka, Nishi-ku, Fukuoka 819-0395
TEL; +81-(0)92-802-4033 E-mail; sls-jimu@sls.kyushu-u.ac.jp

7. Examination Date, Examination Place

- (1) Date: One day from May 22 (Mon) to June 2 (Fri), 2017.
- (2) Place: The details of the examination place, or room, etc will be sent to the applicants when the examination card is sent back.

*Persons who didn't receive an examination card may contact the Academic Affairs Section until the day of the examination.

8. Examination Subjects

At 5 Divisions (Bioinformatics, Life Engineering, Medical Molecular Cell Biology, Molecular Life Sciences, Biological Sciences), the following examination will be given.

- (1) English essay on specialized subjects and related topics
- (2) Interview in English

9. Announcement of the Result of Screening

- (1) Date: June 16 (Fri), 2017, 11:00 am
- (2) Place: The result will be posted on the notice board at the Main Entrance, West Zone 1, second floor, Ito Campus, Kyushu University. The result will be informed to the applicants and shown in website at <http://www.sls.kyushu-u.ac.jp/en/>.

10. Enrollment procedure

Successful applicants should complete the entrance procedure by the prescribed date after receiving the entrance procedure documents, which will be sent in the middle of July, 2017.

11. Entrance fee and tuition fees (※This is not required for applicants those who are MEXT (Ministry of Education, Culture, Sports, Science, and Technology) Scholarship Students.)

Entrance fee : 282,000yen

Tuition fees : 267,900yen [Annual amount 535,800yen]

12. Information Desk

Applicants can receive a WORD file with the application forms upon inquiry via E-mail to the following address.

Academic Affairs Section, Graduate School of Systems Life Sciences, Kyushu University

744 Motooka, Nishi-ku, Fukuoka 819-0395

TEL; +81-(0)92-802-4033 E-mail; sls-jimu@sci.kyushu-u.ac.jp

九州大学大学院システム生命科学府 博士課程第3年次編入学入学願書
 THE GRADUATE SCHOOL OF SYSTEMS LIFE SCIENCES, KYUSHU UNIVERSITY
 APPLICATION FORM FOR ADMISSION (as THIRD YEAR STUDENT at DOCTORAL COURSE)

Year(年) _____ Month(月) _____ Day(日) _____.

姓名(自国語) Name in full, in native language	Sur name, Given name, Middle name		※ (受験番号) Examinee's number	※
姓名(ローマ字) Name in Roman block capitals	Sur name, Given name, Middle name		(国籍) Nationality	
姓名(カタカナ(記載可能な者のみ)) Name in Japanese Katakana if you know it	Family name, First name, Middle name		(性別) Gender	<input type="checkbox"/> Male(男) <input type="checkbox"/> Female(女)
(年齢)/Age	Age(年齢),	(婚姻の別) Marital Status	<input type="checkbox"/> Single(未婚)	
(誕生日) Date of birth	Year(年) / Month(月) / Day(日)		<input type="checkbox"/> Married(既婚)	
(希望する研究分野) The preferred division				
(希望する指導教員) The preferred supervising Professor				
(研究題目) The title of proposed research				
(最終学歴) The latest academic background	University(大学名)	Graduate school(学部名)	Department(専攻名)	
	Year(年) / Month(月) / Day(日)		<input type="checkbox"/> completed(卒業) <input type="checkbox"/> will complete(卒業見込)	
(現住所) Present address				
	Mobile phone number(携帯番号):			
	E-mail address(E-mail アドレス):			
(確実な連絡先) Permanent address				

- Application should be typewritten or handwritten in Roman block capitals. (申請書はWord等のワープロソフトで作成するか、楷書で記入すること。)
- Do not use erasable marking pens (Pilot FriXion Ball etc.). (消去可能な筆記用具(フリクションペン等)を使用しないこと。)
- Numbers should be in Arabic figures. (アラビア数字(算用数字)を使用すること)
- Proper nouns should be written in full, and not be abbreviated. (固有名詞は省略しないこと)
- Do not fill in at the blank marked※. (※の欄は記入しない)
- Applicants who are students of Kyushu University must fill in the student ID number to the right between parentheses. (九州大学に在籍している場合は、学籍番号をカッコ内に記入すること) (student ID number(学籍番号): _____)

Curriculum vitae (履歴書)

Educational background (学歴) :

		Names and Address of School (学校名及び所在地)	Officially required number of years of schooling (正規の修学年数)	Year and Month of Entrance and Completion (入学及び卒業年月)	Duration of Attendance (修学年数)	Qualification (取得資格)	Major Subject (専攻科目)
Primary Education (初等教育) Elementary School (小学校)		Name (学校名) Location (所在地)	yrs (年)	From (入学) To (卒業)	yrs (年) and mons (月)		
Secondary Education (中等教育) Secondary School (中高等学校)	Lower (中等学校)	Name (学校名) Location (所在地)	yrs (年)	From (入学) To (卒業)	yrs (年) and mons (月)		
	Upper (高等学校)	Name (学校名) Location (所在地)	yrs (年)	From (入学) To (卒業)	yrs (年) and mons (月)	※	
Tertiary Education (高等教育) Undergraduate Level (大学)		Name (学校名) Location (所在地)	yrs (年)	From (入学) To (卒業)	yrs (年) and mons (月)		
Graduate Level (大学院)		Name (学校名) Location (所在地)	yrs (年)	From (入学) To (卒業)	yrs (年) and mons (月)		
Total of the years of schooling mentioned above (以上を通算した全学校教育修学年数) *as of April 1, 2017 (2017年4月1日現在)			yrs (年)				

Note (留意事項) :

- Kindergarten education or nursery school education is excluded. (幼稚園・保育園教育は含まれない。)
- Preparatory education for university admission is included in secondary education. (いわゆる「大学予備教育」は中等教育に含まれる。)
- In the case that the applicant has passed the qualifying examination for admission to a university, indicate so in the blank marked ※.
(「大学入学資格試験」に合格している場合には、その旨※欄に記入すること。)
- Any school years or levels skipped should be indicated in the fourth column (Diploma or Degree Awarded, Major Subject, Skipped Years/Levels). (Example: Graduated high school in 2 years.) (いわゆる「飛び級」をしている場合には、その旨を該当する教育課程の「学位・資格・専攻科目・飛び級の状況」欄に記入すること。(例) 高校3年次を飛び級より短期卒業)
- Calculate and write the total number of years studied based on duration as a student. (including extended leave such as summer vacation) (修学年数合計は在籍期間を算出し、記入すること。(長期休暇も含める))
- You may use a separate piece of paper if the above space is insufficient. In such a case, please stipulate that the information is on a separate page. (上記に書ききれない場合は、別紙に記入することも可能。しかしその場合は、別紙に記入する旨を上記学歴欄に明記すること。)

Employment Record: Begin with the most recent employment, if applicable. (職歴)

Name and Address of Organization (勤務先及び所在地)	Period of Employment (勤務期間)	Position (役職名)	Type of Work (職務内容)

Note (留意事項) : State the titles, if any, of books or papers (including graduation thesis authored by the applicant) (mention the name and address of publisher as well as the date of the publication) in the RESEARCH RECORD. (著書、論文、(卒業論文を含む) があれば、研究業績概要調査 (様式4) に、その題名、出版社名、出版年月日、出版場所を記入して提出すること。)

RESEARCH RECORD (研究業績概要調書)

姓名(ローマ字) Name in Roman block capitals	Family name, First name, Middle name	(誕生日) Date of birth	Year(年) / Month(月) / Day(日)
姓名(カタカナ(記載 可能な者のみ)) Name in Japanese Katakana if you know it	Family name, First name, Middle name	(年齢) Age	Age(年齢),
		(性別) Gender	<input type="checkbox"/> Male(男) <input type="checkbox"/> Female(女)
(現住所) Present address			
	Mobile phone number (携帯番号):		
	E-mail address (E-mail アドレス):		
(現在の所属) Present status (university/company /organization, title)	(所属機関の住所) Name		
	(所属機関の住所) Address		
(希望する研究分野) The preferred division			
(業績目録(もしあれば、研究論文、著書、学術論文 (受験者の学位論文含む)、国際会議発表時の資料、 特許、発明等) State the titles, if any, of published papers, subjects of books and thesis (including graduation thesis authored by the applicant), papers presented at an International Conference, patents, inventions, etc.	(論文題目、巻数、ページ数及び発行年または発行さ れた月日等) Title, Vol., Page, and Year of Journal, or date on which thesis was published.	(全ての著者名) Name of all Authors	
	(国際会議のタイトル、開催年等) Title and Year of international conference etc.		

(様式4 (国際) / Form-4_ International Course _A)

<p>(業績目録(もしあれば、研究論文、著書、学術論文(受験者の学位論文含む)、国際会議発表時の資料、特許、発明等) State the titles, if any, of published papers, subjects of books and thesis (including graduation thesis authored by the applicant), papers presented at an International Conference, patents, inventions, etc.</p>	<p>(論文題目、巻数、ページ数及び発行年または発行された月日等) Title, Vol., Page, and Year of Journal, or date on which thesis was published. ----- (国際会議のタイトル、開催年等) Title and Year of international conference etc.</p>	<p>(全ての著者名) Name of all Authors</p>

注意事項：(1) 上記に記載した別刷り、国際会議のプロシーディング等の写しを添付すること。

(2) 記入欄が不足する場合は、別紙を添付することが可能です。

Note: (1) Attach reprints or copies of published papers, conference proceedings, etc..

(2) You may add similar forms when running short on this form.

(様式 5 (国際) / Form-5_ International Course _B)

(出願資格 (3)により出願する者のみ提出すること)

(Applicants who intend to apply in accordance with qualification (3) should submit.)

Year(年) , Month(月), Day(日)

出願資格認定申請書

Application for Recognition of Academic Requirements

九州大学大学院システム生命科学府長 殿

To Dean

The Graduate School of Systems Life Sciences,
Kyushu University

(姓名(ローマ字))

Name in Roman block capitals

(姓名(カタカナ(記載可能な者のみ)))

Name in Japanese Katakana (If you know)

(誕生日)

Date of Birth Year(年) / Month(月) / Day(日)

このたび貴学府博士課程入学試験に出願するに先立ち、出願資格の事前審査を受けたく、関係書類を添えて申請いたします。

For an individual evaluation of academic requirements as an applicant to Doctoral Course of The Graduate School of Systems Life Sciences, Kyushu University, I hereby apply for the all the documents related.

(希望する研究分野) The preferred division	
(希望する指導教員) The preferred supervising Professor	

KYUSHU UNIVERSITY

How to make the Payment for the Application Fee by Credit Card, Union Pay, and Alipay.

24 hours a day, 365 days a year, you can pay anytime! Easy, Convenient and Simple!

You can pay the Application Fee by using Credit Card, Union Pay, and Alipay.



Access

<https://e-shiharai.net/english/>



Online Transaction

1. Top Page	Click "Examination Fee".
2. Terms of Use and Personal Information Management	Please read the Terms of use and Personal Information Management. Click "Agree" button located in the lower part of this page if you agree with these terms. Click "Not agree" button located in lower part of this page if you do not agree with these terms.
3. School Selection	Select "Kyushu University (Undergraduate Schools)" or "Kyushu University (Graduate Schools)."
4. School Information	Read the information carefully and click "Next".
5. Category Selection	Choose First to Fourth Selection and add to Basket.
6. Basket Contents	Check the contents and if it is OK, click "Next".
7. Basic Information	Input the applicant's basic information. Choose your credit card and click "Next".

Paying at Credit Card

Input Credit Card Number (15 or 16-digits), Security Code and Expiration date.

All of your application information is displayed. Check and Click "Confirm".

Click "Print this page" button and print out "Result" page.

Paying at Union Pay, Alipay

Follow the onscreen instructions to complete the card payment.

Please click the "Application Results" button in the upper part of this site (e-shiharai.net).

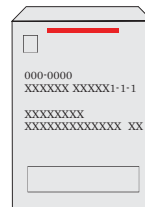
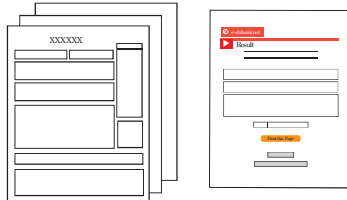
Please write down the "Receipt Number" given when you complete your application, and enter your "Payment Method", "Receipt Number" and "Birth Date". Please make sure your printer is ready.

Please print out the "Payment Inquiry - Inquiry result" page.

Application

Enclose the printed "Result" page in an application envelope with other necessary application documents.

Necessary application documents



Mail it via post

POST OFFICE

[NOTICE/FAQ]

- You can make a payment anytime, during the payment period mentioned in the application instructions.
- Please refer to the application instructions and complete payment in time.
- Please complete payment by 11:00 pm Japan time, on the last date of the payment period.
- Please note that refund is not possible once you have made a payment of Application fee.

- A fee is added to Examination fee. For further info, please visit our website.
- It is possible to use a card which carries a name different from that of the applicant. However, please make sure that the information on the basic information page is that of the applicant him/herself.
- If you did not print out "Result" page, you can check it later on Application Result page. Please enter "Receipt Number" and "Birth Date" to redisplay.
- Please directly contact the credit card company if your card is not accepted.

For questions or problems not mentioned here, please contact:

E-Service Support Center Tel: +81-3-3267-6663 (24 hours everyday)

Outline of each division

Division	Staff	Research field
Bioinformatics	Prof. Einoshin Suzuki Prof. Keiji Iramina Prof. Seiichi Uchida Prof. Kiyoshi Toko (*) Prof. Kenshi Hayashi Prof. Masahiro Okamoto (*) Prof. Johan Lauwereyns Asso. Prof. Osamu Maruyama Asso. Prof. Tsuyoshi Okamoto Asso. Prof. Kosuke Tashiro Asso. Prof. Taizo Hanai	Genome informatics is an interdisciplinary research field of bioscience and information science that was introduced during the genome project. In order to master genome science and its applications to the medical field, not only are ordinary bioscience subjects necessary, but also informational subjects from basic to advanced levels. This research field focuses on education and research that enable students to analyze subjects from genome to the basic principles of life on a basis of the theory of informatics. For this purpose, our course provides graduates with cutting-edge knowledge about measurement theory, mathematical science, statistics, basic informatics, database, algorithms, machine learning, cognitive neuroscience, bioinformatics and their applications to bioscience and medicine.
Life Engineering	Prof. Masamichi Kamihira Prof. Yoshiki Katayama Prof. Kazuhiro Hara Prof. Susumu Kudo Prof. Renshi Sawada (**) Prof. Yoshimitsu Kakuta Asso. Prof. Hiroshi Mizumoto Asso. Prof. Akihiro Kishimura Asso. Prof. Takeshi Mori Asso. Prof. Hirotaka Okabe Asso. Pro. Yoshinori Katakura	Here we aim to train future leaders who specialize in the diverse fields of life engineering, with a combined background of engineering and agriculture. The emphasis is on biotechnology and biomedical engineering, though there exists in fact a variety of applied fields where design and industrialization can be approached via the development of life sciences. We focus particularly on: (a) the development of biotechnology for the purpose of production; (b) the development of biotechnology, where the biomedical engineer integrates biological, chemical, and physical findings about the organization and internal organs of living bodies; (c) the development of biological macromolecules and biomaterials targeting bio-compatibility, biodegradability, and/or biological absorption; (d) the development of bio-imaging techniques and nano micro machine techniques; (e) the study of biomacromolecules.
Medical Molecular Cell Biology	Prof. Hisao Kondo Prof. Ken-ichiro Morohashi Prof. Mikita Suyama Prof. Daisuke Kohda Prof. Hiroyuki Kubota Prof. Yuichi Tukada Prof. Takeshi Banba Prof. Yasuyuki Ohkawa Asso. Prof. Yoshihiro Yamanishi Asso. Prof. Hiroki Shibata Asso. Prof. Atsushi Shimada Asso. Prof. Shinsuke Uda Asso. Prof. Yoshihiro Izumi	We provide comprehensive educational opportunities to students for the diverse field of medical genome sciences including molecular medicine, molecular biology, genetics and population genetics, structural biology, bioinformatics, and bioethics. We also provide the students the opportunities of joining in the cutting-edge researches, such as 1) Analysis of human variation viewed from genomic diversity; 2) Analysis of homeostatic mechanisms based on genome information; 3) Structural and functional analysis of proteins and their application for medicine; 4) Genetic analysis of multifactorial disorders and intractable disorders; 5) Development of new methods in data analyses to expand the medical knowledge.
Molecular Life Sciences	Prof. Koh Iba Prof. Shigehiko Tamura Prof. Junichi Ikenouchi Prof. Takeshi Ishihara Prof. Isao Ito (**) Prof. Toshiki Tsurimoto Prof. Shun-ichiro Kawabata Asso. Prof. Kazuya Nomura (*) Asso. Prof. Makoto Koga Asso. Prof. Takayuki Teramoto Asso. Prof. Tetsuro Takahashi Asso. Prof. Takumi Koshiba	The eukaryotic cell is a core structural unit for the constitution of bodies of higher organisms, and utilizes highly sophisticated membrane structures to perform various life functions. The division of Molecular Life Sciences conducts education and research of integrated biology of animals and plants from basic structure of genes to high-order function of bodies, focusing on the following aspects: mechanisms of chromosomal DNA replication to maintain genome structures; molecular dynamics of high-ordered structures from protein complexes to organelles managing cellular functions; signaling mechanisms through cell-cell communication for cell proliferation, cell formations and regulation of the metabolism; and mechanistic features of functions in individual bodies including development and differentiation, formation of neural networks and immune systems. We also provide basic lectures to students of other divisions aiming to improve their understanding of molecular biology. The lectures include basic structures and functions of the cell, developmental mechanisms of individual bodies from fertilization to highly organized cell society, and coordination of nerve systems to manage high-ordered biological activities.
Biological Sciences	Prof. Tetsukazu Yahara Prof. Yoh Iwasa (*) Prof. Yoshitaka Kobayakawa Prof. Hidenori Tachida (**) Prof. Mutsunori Tokeshi Asso. Prof. Eiichi Kasuya Asso. Prof. Akiko Satake Asso. Prof. Natsuko Hamamura Asso. Prof. Shingo Iwami Asso. Prof. Alfred E. Szmids (*) Asso. Prof. Toshiyuki Hayakawa	Recent developments in ecology and evolutionary biology provide us better tools to investigate interactions among individuals and the coexistence of species within ecosystems. Similar advances in other branches of biology have likewise led to improved knowledge and technique. At the level of individuals and the cell developments in physiology have refined our methodologies of analyzing biological phenomena. Comparable advances in molecular biology have enhanced our knowledge of genomes and clarified details of the mechanisms underlying physiological processes. The current requirement is to integrate all such developments to investigate interactions between organisms and their environment and to deepen our understanding of the mechanisms underlying various biological attributes found at the levels of individuals and populations. With this in mind, our study areas include 1) perceptions of, and responses to, environmental stimuli in animals, 2) reception of, and responses to, light in plants, 3) adaptive strategies in reproduction and social structure in organisms, 4) establishment and maintenance of community structure in marine organisms, 5) molecular evolution and the maintenance of genetic diversity, and 6) mathematical aspects of complex biological phenomena. In such a focus we aim to integrate biological knowledge from the molecule, cell, individual and population levels. By participating in our division, students can learn how to conduct cutting-edge research on mechanisms of animal and plant responses to environmental stimuli, ecological interactions between organisms and environments, and the generation and maintenance of biodiversity.

(*); will be retired on March 31, 2018.

(**); will be retired on March 31, 2019.

Keywords for each educational group

	Educational group	Staff	Keywords
Bioinformatics	Data Mining and Bioinformatics	Professor Einoshin Suzuki	Data Mining, Machine Learning, Discovery Robot http://www.i.kyushu-u.ac.jp/~suzuki/suzuki.html
		Associate Professor Osamu Maruyama	Systems biology, Computational biology, Algorithms, Machine learning http://www2.math.kyushu-u.ac.jp/~om/
	Neuroimaging and Neuroinformatics	Professor Keiji Iramina	Neuroimaging, Measurement of Brain Function, Biomedical Engineering, Brain Computer Interface (BCI), Magnetencephalogram (MEG), Electroencephalogram (EEG), Near-Infrared Spectroscopy (NIRS), Transcranial Magnetic Stimulation (TMS)
		Associate Professor Tsuyoshi Okamoto	Computational Neuroscience (computer simulation of visual cortex), Neuroinformatics (analyses of electrophysiological data: EEG, MEG), Experimental Neuroscience (assessment of living environment) http://artsci.kyushu-u.ac.jp/~okamoto/index.en.html
	Biomathematical Science	Professor Seiichi Uchida	Visual Information Processing, Signal Processing, Image Processing, Optimization, Pattern Recognition, Database
		Associate Professor Kei Hirose	L1 Regularization, Sparse Estimation, Model Selection, Multivariate Analysis, Factor Analysis
	Bioelectronics	Professor Kiyoshi Toko	Taste sensor, Ultra high sensitive biosensor, Kansei biosensor, Electronic material, Functional material http://ultrabio.ed.kyushu-u.ac.jp/tope.htm
		Professor Kenshi Hayashi	Organic electronic material and devices, Odor sensor, Odor informatics http://o.ed.kyushu-u.ac.jp/oeclab_e/Welcome.html
	Gene Expression Control	Associate Professor Kosuke Tashiro	transcriptional regulation, cell differentiation, animal development, environmental microorganism, transcriptome
	Biological Information Systems	Professor Masahiro Okamoto	Bioinformatics, nonlinear dynamics, system biology, evolutionary algorithm, computer simulation http://www.brs.kyushu-u.ac.jp/~okahon/
		Associate Professor Taizo Hanai	Synthetic Biology, Metabolic Engineering, Systems Biology, Bioalcohol, Bioinformatics, Artificial Genetic Network, Medical Application http://www.brs.kyushu-u.ac.jp/~taizo/indexe.htm
	Cognitive Neuroscience	Professor Johan Lauwereyns	Decision Making, Information Processing, Neural Circuits, Cognitive Neurodynamics, Neurophysiology, Visual Perception, Behavioral Analysis http://www.sls.kyushu-u.ac.jp/~dubito/

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	Educational group	Staff	Keywords
Life Engineering	Life Process Engineering	Professor Masamichi Kamihira	Biomedical Engineering, Tissue Engineering, Genetic Engineering, Virus Engineering, Transgenic Animals http://www.chem-eng.kyushu-u.ac.jp/lab3/Eng_ver.html
		Associate Professor Hiroshi Mizumoto	hybrid artificial liver, regenerative medicine, stem cell, multicellular organoid, animal cell culture http://www.chem-eng.kyushu-u.ac.jp/lab6/english/
	Assembled Chemistry for creating functions	Professor Yoshiki Katayama	Intracellular signal transduction, drug delivery system, gene delivery system, biochip, biomaterials, bioanalysis http://www.chem.kyushu-u.ac.jp/~katayama/en/index.html
		Associate Professor Akihiro Kishimura	Soft Materials, Supramolecular Chemistry, Drug Delivery System, Nano-reactors, Nano-physiology http://www.chem.kyushu-u.ac.jp/~katayama/en/index.html
		Associate Professor Takeshi Mori	Biomaterials, Drug Delivery System, Regenerative Medicine http://www.chem.kyushu-u.ac.jp/~katayama/en/index.html
	Life Engineering and Physics	Professor Kazuhiro Hara	Hydrogels, Hydrocolloids, Synchrotron-light, Neutron scattering, Environment Purification http://www.sls.ap.kyushu-u.ac.jp/
		Associate Professor Hiroataka Okabe	Biophoton, Reactive Oxygen, Optical Somatometry, Soft Matter Actuator, Biomimetics, Biophysics http://www.sls.ap.kyushu-u.ac.jp/
	Biofunctional Engineering	Professor Susumu Kudo	Biomechanics, Biotransport, Biomaterials, Cellular Mechanics http://www.bfe.mech.kyushu-u.ac.jp/pub.html
	Microsystems and Medical Engineering	Professor Renshi Sawada	Optical MEMS (Micro Mechanical Electro Mechanical Systems), medical engineering, Bio-microsystems, Micro displacement sensor, Blood flow sensor, Microencoder, Nanoimprint, Avian influenza http://nano-micro.mech.kyushu-u.ac.jp/top_Eng.html
	Cellular Regulation Technology	Associate Professor Yoshinori Katakura	Aging, Anti-aging, Functional food, Life-style-related disease
Structural Biology	Professor Yoshimitsu Kakuta	Structural biology, biochemistry, gene translation, gene translation, starch engineering, sulfotransferase, glycosyltransferase	

Keywords for each educational group

	Educational group	Staff	Keywords
Medical Molecular Cell Biology	Molecular Cell Biology	Professor Hisao Kondo	Organelles, Cell cycle, membrane fusion, ER, Golgi
	Biology of Sex Difference	Professor Ken-ichiro Morohashi	sex differentiation, tissue specific expression, nuclear receptor http://www.med.kyushu-u.ac.jp/seisaseibutu/
	Computational Biology	Professor Mikita Suyama	Comparative genomics, High-throughput data analysis, Molecular evolution
	System Cohort	Associate Professor Yoshihiro Yamanishi	Bioinformatics, Systems Biology, Chemoinformatics, Machine Learning, Drug Discovery, Precision Medicine http://www.bioreg.kyushu-u.ac.jp/labo/systemcohort/
	Medical Genomics	Associate Professor Hiroki Shibata	Human genetics, Population genetics, Genome diversity, Molecular evolution, Psychiatric disorder, Neurological disorder http://www.gen.kyushu-u.ac.jp/~byouin/
	Structural Life Science	Professor Daisuke Kohda	Structural biology, X-ray crystallography, Nuclear Magnetic Resonance (NMR), Cryoelectron Microscopy, Molecular recognition mechanism, Weak protein-ligand interactions with wide specificities, Mitochondrial import system, N-glycosylation system, NADPH oxidase system http://vsb.bmr.kyushu-u.ac.jp/VSB/index_en.html
		Associate Professor Atsushi Shimada	Structural biology, X-ray crystallography, Endocytosis, Cytoskeleton, Signal transduction http://vsb.bmr.kyushu-u.ac.jp/VSB/index_en.html
	Integrated Omics	Professor Hiroyuki Kubota	Trans-omic, Integrated-Omics, Systems Biology, Mathematical Simulation, Computer Simulation, Homeostasis, Signal Transduction, Mebolism http://www.bioreg.kyushu-u.ac.jp/labo/omics/index_en.html
		Associate Professor Shinsuke Uda	Trans-omics, Systems biology, Signal transduction, Insulin, Information science, Statistical data analysis, Numerical simulation http://www.bioreg.kyushu-u.ac.jp/labo/omics/index_en.html
	Cellular Memory	Professor Yuichi Tukada	Cellular Memory, Epigenetics, Epigenome, Chromatin, Genome Reprogramming, Cell Fate Determination
	Metabolomics	Professor Takeshi Banba	Metabolomics, Metabolome, Metabolism, Analytical chemistry, Disease analysis, Toxicology, Food functional analysis http://bamba-lab.com/?lang=en
		Associate Professor Yoshihiro Izumi	Metabolomics http://bamba-lab.com/?lang=en
	Transcriptomics	Professor Yasuyuki Ohkawa	Transcriptomics, Transcription, Gene Regulation, Epigenome, Chromatin, Deep sequencing technology, Cell differentiation, skeletal muscle differentiation, Bioinformatics http://tx.bioreg.kyushu-u.ac.jp/

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	Educational group	Staff	Keywords
Molecular Life Sciences	Molecular and Development Cell Biology	Associate Professor Kazuya Nomura	glycome, C. elegans, glycobiology, proteome, membrane biology http://seibutsu.biology.kyushu-u.ac.jp/~nomura/index.html
	Plant Molecular Biology	Professor Koh Iba	Environmental/Stress Plant Physiology, Stomatal CO2 Signaling, Arabidopsis thaliana http://www.biology.kyushu-u.ac.jp/~plant/
		Associate Professor Juntaro Negi	Arabidopsis thaliana, Stomata, Anion channel, Transcription Factor, Chloroplast http://www.biology.kyushu-u.ac.jp/~plant/
	Molecular Cell Biology	Professor Shigehiko Tamura	Organelle biogenesis, Protein kinesin, Peroxisome biogenesis disorder and pathogenic gene, Peroxisome assembly factors, peroxins, http://www.biology.kyushu-u.ac.jp/~taisha/
	Membrane Cell Biology	Professor Junichi Ikenouchi	Epithelial Polarity, Cell Adhesion, Lipids, Epithelial-mesenchymal transition http://www.biology.kyushu-u.ac.jp/~taisha/Ikenouchi%20-%20EN/index_EN2.html
	Molecular Genetics	Professor Takeshi Ishihara	C. elegans, Behavioral Genetics, Live Imaging, Brain, Neural Network, Molecular Mechanisms, Informational Processing, Olfaction, Behavioral Plasticity, Behavioral Regulation by Internal Environments http://www.biology.kyushu-u.ac.jp/~bunsiide/
		Associate Professor Makoto Koga	C. elegans, Molecular Genetics, Manic Depression, Lithium Ion http://www.biology.kyushu-u.ac.jp/~bunsiide/
		Associate Professor Takayuki Teramoto	C. elegans, Neuronal Network, Fluorescence Imaging, Calcium Ion, Magnesium Ion, http://www.biology.kyushu-u.ac.jp/~bunsiide/
	Molecular Neuroscience	Professor Isao Ito	Brain, Neuron, Synapse, Receptor, Plasticity http://seibutsu.biology.kyushu-u.ac.jp/~neurosci/en/index.html
	Chromosomal Functions	Professor Toshiki Tsurimoto	chromosomal replication, replication proteins, DNA polymerase, cell cycle, protein complexes http://seibutsu.biology.kyushu-u.ac.jp/~chromosome/top.html
		Associate Professor Tatsuro Takahashi	DNA repair, chromatin, mismatch repair, chromosome cohesion, homologous recombination, chromosome replication, <i>Xenopus laevis</i>
	Protein Science and Cellular Biochemistry	Professor Shun-ichiro Kawabata	Invertebrate Innate Immunity, Serine Proteases, Lectins, Antimicrobial Peptides, Transglutaminase, Protein Cross-linking, Pathogen Recognition http://www.biology.kyushu-u.ac.jp/~biopoly/
		Associate Professor Takumi Koshiba	Mitochondria, antiviral innate immunity, membrane fusion, signaling event, GTPase http://www.biology.kyushu-u.ac.jp/~koshiba/index.html

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Biological Sciences	Ecology	Professor Tetsukazu Yahara	Plant reproductive ecology, conservation ecology, plant ecological genomics, speciation, daylily, Stevia, Cambodia, China, Mexico http://seibutsu.biology.kyushu-u.ac.jp/~ecology/lab/index-e.html
		Associate Professor Eiiti Kasuya	Behavioral ecology, evolution of mating behavior, sexual conflicts, social behavior, statistical analyses of ecological data http://kasuya.ecology1.org/
		Associate Professor Akiko Satake	ecology, environmental science, evolution, mathematical biology, ecogenomics http://seibutsu.biology.kyushu-u.ac.jp/~satake/en/index.html
		Associate Professor Natsuko Hamamura	Biogeochemistry, Microbial Ecology, Bioremediation, Arsenic biotransformation, Metagenomics, Microbial diversity and evolution, Ecotoxicological assessment http://hamamuralab.com/
	Theoretical Biology	Professor Yoh Iwasa	Mathematical and computational modeling of biological phenomena. Modeling of development and morphogenesis, immune system, animal behavior, life history, circadian rhythm, population extinction, evolution of cooperation, simulation. http://bio-math10.biology.kyushu-u.ac.jp/~iwasa/
		Associate Professor Shingo Iwami	Computational virology and immunology, Mathematical modeling, Quantification, Parameter estimation, HIV, HBV/HCV, Influenza virus, Lymphocyte dynamics
	Cell Function	Professor Yoshitaka Kobayakawa	Hydra, Pattern Formation, Cell Differentiation, Gametogenesis, Sexual Reproduction, Symbiosis, Molecular Phylogeny
	Evolutionary Genetics	Professor Hidenori Tachida	evolution, population genetics, molecular evolution, natural selection, speciation
		Associate Professor Alfred E. Szmidt	population, genetics, evolution, phylogeography, phylogeny http://genetics.biology.kyushu-u.ac.jp/ http://www.popgen.org
		Associate Professor Toshiyuki Hayakawa	Molecular evolution, Human evolution, Sialic acid, Glycobiology, Evolutionary medicine, Mental disorder
	Marine and Fresh water Biology	Professor Mutsunori Tokeshi	community ecology, biodiversity, coastal ecosystems, coral reef systems, freshwater ecosystems http://ambl-ku.jp/