

Public University Corporation
GRADUATE SCHOOL
THE UNIVERSITY OF
KITAKYUSHU

Graduate School of Environmental Engineering
Special Selection for International Students
Summer Selection Admissions Guide
Doctoral Program
October 2018 Enrollment
April 2019 Enrollment



To apply, download the application guidelines,
print them out, and complete the forms.
Admissions Guides can also be requested by post.

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«Included Forms»

- Application Form (Form 1 (October 2018 Enrollment) (April 2019 Enrollment))
- Test Registration Card (Form 2), Photo Card (Form 3), Name & Address Cards (Form 4)
- Research Plan Survey (Form 5)
- Entrance Qualifications Screening Application Form (Form 6) (for those who wish the screening only.)
- English Examination Exemption Application (Form 7) (for those who wish for the exemption only.)

Admission Policy
2nd Session, Doctoral Course, Graduate School of Environmental Engineering

	Educational Philosophy and Goals		Ideal Applicants		
Graduate Programs in Environmental Systems	Focused on sustainable development, these courses attempt to foster high-level technical experts, researchers, and educators who can contribute to the society with adequate awareness of energy and environmental problems.	To nurture researchers and educators with great competence in utilizing advanced expertise concerning environmental systems, in playing an active part in the international arena	<ul style="list-style-type: none"> -Persons with wide-ranging interests in environmental problems -Persons with knowledge of a specialized academic field, who are willing to make every effort to utilize advanced expertise -Persons who have creative and independent minds and who are eager to meet the challenges of leading-edge research -Persons who have acquired the necessary education and moral values required for technical experts and researchers -Persons who are willing to improve their communicative competence in both Japanese and English 	Chemical Processes and Environments	○Persons determined to obtain competence in research and development of leading-edge environmental technology related to chemistry, including research and development of highly-functional catalysts and advanced materials, such as environmentally-friendly materials and functional new materials, as well as chemical processing of toxic materials
				Environmental Biosystems	○Persons determined to obtain extremely advanced expertise concerning environmental biosystems ○Persons determined to become researchers and educators with the great competence needed to play an active part in the international arena in relation to environmental biosystems
				Environment and Resources Systems	○Persons determined to obtain more advanced expertise for establishing a sustainable society ○Persons determined to become researchers and educators who will actively solve problems in international and interdisciplinary arenas, such as environmental conservation and improvement, as well as resource cycling, and also problems in establishing environmental-social systems in the local region and in developing countries in Asia ○Persons with the extensive and advanced fundamental knowledge required for further learning
Graduate Programs in Environmental Engineering		To nurture researchers and educators with great competence in utilizing advanced expertise in environmental engineering, and in playing an active part in the international arena		Mechanical Systems Engineering	○Persons who have obtained expertise and technological knowledge in mechanical systems engineering and who are willing to develop advanced expertise ○Persons determined to become researchers and educators who take into consideration a good balance between lower environmental burdens and economic prosperity as "sustainable development" and who are in international and interdisciplinary ways actively utilizing advanced mechanical systems technology
				Architecture	○Persons determined to obtain more advanced expertise for realizing an architecture for the future ○Persons determined to become researchers and educators who are active in international and interdisciplinary ways and who have an understanding of morals as technical experts
Graduate Programs in Information Engineering		To nurture researchers and educators with the great competence needed to autonomously extracting and solving agendas, utilizing advanced expertise in information engineering, and playing an active part in the international arena		Communications and Media Processing	○Persons determined to utilize their advanced expertise in the technology of information and communication networks and media processing technology ○Persons determined to become researchers and educators with the great competence needed to play an active part in the international arena
				Computer Systems	○Persons determined to become researchers and educators with expertise in VLSI systems, control systems and embedded systems ○Persons determined to become researchers and educators with the great competence needed to play an active part in the international arena

※This admission policy may change accompanying the reorganization of courses in 2019.

I October 2018 Enrollment

1. Schedule

Application Deadline	From May 17 (Thu) , 2018 to May 25 (Fri), 2018
Test Registration Card Delivery Date	Around May 30 (Wed), 2018
Test Date	July 1 (Sun), 2018 * In the event that the entrance examinations cannot take place as scheduled due to an emergency, there will be an announcement on the website. Website: http://www.kitakyu-u.ac.jp/env/
Test Site	The University of Kitakyushu Hibikino Campus (1-1 Hibikino, Wakamatsu-ku, Kitakyushu, Fukuoka)
Notification of Results	July 11 (Wed), 2018
Admission Procedures	From July 17 (Tue) , 2018 to July 20 (Fri), 2018 (Scheduled)

2. Expected Enrollment Numbers

Faculty	Major	Number of International Students Accepted
Graduate School of Environmental Engineering	Graduate Programs in Environmental Systems	a few
	Graduate Programs in Environmental Engineering	a few
	Graduate Programs in Information Engineering	a few

3. Requirements for Eligibility

Special Selection for International Students

Those who have completed 16 years of school education outside Japan and meet any of the requirements from (1) to (3).

- (1) Those who have obtained, or are expected to obtain a Master's degree by September 30, 2018.
- (2) Those who have been conferred, or are expected to be conferred, a degree corresponding to a Master's degree outside Japan by September 30, 2018.
- (3) Those who are 24 years old or older as of September 30, 2018, and whom the Graduate School has recognized, through screening of entrance qualifications, as having academic abilities equivalent to a Master's degree. (Note)

(Note) Entrance qualifications are screened for those who intend to apply under requirement (3) before submission of the application.
Refer to **【Entrance Qualifications Screening】** (page 2).

<<Important Notice Regarding Admission>>

If your current resident status is not College Student (e.g. Short-term stay, Pre-college Student, etc.), After completing the enrollment procedures (or after receiving official notice from the university that your application has been successful) you must change your residence status to College Student (Ryugaku) or obtain a College Student visa at the Immigration Bureau of the Ministry of Justice.

【Entrance Qualifications Screening】 (for those of whom it is required)

A faculty committee screens the entrance qualifications as follows. Contact the administrative office indicated below for details.

I. Documents for Submission

- Application Form (Form 1)
- Research Plan Survey (Form 5)
- Entrance Qualifications Screening Application Form (Form 6)
- Official transcripts from the Master's course you attended or you are attending
- Specifics of previous academic performances and research

II. Application Deadline

Submit by: May 1 (Tue), 2018

III. Submit to:

The University of Kitakyushu, Administrative Office,
Academic Service Department Division II Entrance Examination Division
(Refer to Section 4, "Application Procedures")

※If you send the documents by mail, use EMS (Express Mail Service) and specify
"Entrance Qualifications Screening Application enclosed" on the envelope in red.

IV. Notification of the Results

To be forwarded to the applicant by mail.

《Contact Information》

The University of Kitakyushu, Administrative Office,
Academic Service Department Division II Entrance Examination Division
Address: 1-1 Hibikino, Wakamatsu-ku, Kitakyushu, Fukuoka 808-0135
TEL: 093-695-3340 E-mail: nyushi@kitakyu-u.ac.jp

4. Application Procedures

Applications must be submitted in person at the address indicated below or by mail through EMS (Express Mail Service) to the Administrative Office. Enclose all documents for submission in an envelope (which you must provide), and submit it before the application deadline. Specify "Application for Graduate School Enclosed" in red on the front of the envelope, and your name, address, and postal code on the back of the envelope.

(1) Application Period: From May 17 (Thu) to May 25 (Fri), 2018

(2) Application Submission Office Hours:(Except Saturdays & Sundays & public holidays)

(Submitting in person) Monday – Friday: 8:30 a.m. – 4:00 p.m.
(until 5:00 p.m. on May 26)
(Lunch break: 12:15 p.m. – 1:15 p.m.)

(By mail) Applications arriving on May 26 (Sat), 2018 or later will be considered valid only if they are postmarked on or before May 24 (Thu), 2018.

(3) Submit or mail to:

The University of Kitakyushu, Administrative Office,
Academic Service Department Division II Entrance Examination Division
Address: 1-1 Hibikino, Wakamatsu-ku, Kitakyushu, Fukuoka 808-0135
TEL: 093-695-3340 E-mail: nyushi@kitakyu-u.ac.jp

(4) Documents for Submission (See below)

Documents	Notes
Application Form [Form 1 (For October 2018 Enrollment)]	Fill in all the necessary items within the bold lines on the included form designated by the School. (* Both sides) Attach a 4cm×3cm photo, either color or black & white, showing your upper body, without a hat or background, looking straight ahead and with your name written on the back.
Test Admission Card [Form 2]	Fill in all the necessary items within the bold lines on the included form specified by the School.
Photo Card [Form 3]	Fill in all the necessary items within the bold lines on the included form designated by the School. Attach the photo as described in the “Application Form”.
Name & Address Cards [Form 4]	Fill in either address card for domestic residents or overseas residents. Make sure you can receive the test admission card, the Notification of acceptance, and any other admission-related documents.
Official Transcripts of Master’s Course or Others	Those who have graduated or are expected to graduate from Graduate School (Master’s course) by September 30, 2018 should submit an official transcript issued by the Graduate School. * Those who have not graduated from Graduate School (except those who are expected to graduate in September 2018) should submit a transcript from their previous school. * For certificates written in a language other than Japanese or English, a Japanese or English translation must be attached.
Documents Verifying the Application Qualifications	Certificate of graduation from Graduate School (Master’s course) or Certificate of prospective graduation (or Student Registration Certificate) * Including those who have a degree in a foreign country that corresponds to a Master’s degree in Japan. 【For those who have not obtained a Master’s degree】 * A copy of the notification of application qualification issued after the advance screening by our faculty committee.
Research Plan Survey [Form 5]	Clearly print a statement of your research plan on the pull-out form designated by the School for which you are applying. * State your reasons for application as specified in the form. * Before applying, you must contact the professor by whom you wish to be supervised.
Examination Fees (¥ 30,000) ※Japanese YEN only	Remit 30,000 yen to the account specified below, and send a copy of the “Application of Remittance” form along with your application. Bank name : The Bank of Fukuoka, Ltd Bank code (Swift Code) : FKBKJPJT Branch name: Kitakyushu Main Office Bank account number : 2555152 Name of the account : Kouritsudaigakuhoujin kitakyushushiritsudaigaku Rijichou Tsuda Junji * Paying bank transfer fee : Borne by remitter (Important!) There are cases where the actual amount we receive is short by bank transfer fee. Then you will need to make another remittance for the shortage, and pay the bank transfer fee another time as well. Therefore, please make sure that the bank remittance fee is added on the top of the required amount to remit.

<p>Any one of the followings: TOEIC (TOEIC L&R) Official Score Certificate, TOEIC (TOEIC L&R)-IP Test Score Report, or TOEFL-iBT Score Report.</p> <p>* Only "Communications and Media Processing", "Computer Systems" are required to submit the score.</p>	<p>Scores must be from tests taken within 24 months from the month that the application period starts.</p> <p>Applicants applying to courses that require submission of test scores must submit their scores. (See 5. Examination Subjects and Selection Method)</p> <p>(1) Applicants who wish to use their TOEIC (TOEIC L&R) public test scores must submit their original Official Score Certificate and a copy.</p> <p>(2) Applicants who wish to use their TOEIC (TOEIC L&R)-IP (Institutional Program) test scores must submit their original Score Report and a copy.</p> <p>(3) Applicants who wish to use their TOEFL-iBT test scores must submit their original Test-Taker Score Report and a copy.</p> <p>* Only scores from TOEIC (TOEIC L&R)-IP tests administered by this university or university co-operative will be accepted.</p> <p>* Applicants submitting scores for the TOEFL-iBT test must submit their Test-Taker Score Report. Official Score Reports will not be accepted.</p> <p>* Submitted original documents will be returned to applicants by post, enclosed with their Test Registration Card, or on the day of the examination.</p> <p>* If applicants cannot submit test scores from (1) to (3) above with their application, a copy of admission ticket of TOEIC (TOEIC L&R) or TOEFL must be submitted. In addition, both the original and a copy of such scores must be submitted at any time up to the day before the examination (excluding Saturdays, Sundays, and Japanese public holidays).</p> <p>* Applicants who submitted test scores with their application but have retaken the test and obtained a higher score may resubmit their new scores at any time up to the day before the examination (excluding Saturdays, Sundays, and holidays).</p>
<p>Certificate of Residence or Copy of Passport</p>	<p>Applicants residing in Japan : a Certificate of Residence (Juminhyo) issued within one month prior to their application.</p> <p>Applicants residing in abroad : a copy of the pages in their passport that show the passport holder's photograph and passport expiration date.</p>

【Notes】

- After submission of the application, no examination fees will be returned, and no changes to documents will be accepted, under any circumstances.
- If a false statement is found in the documents, authorization of admission will be revoked.
- After submission of the application, no documents will be returned.
- As for those who have taken the examination under the condition that they meet expected to meet the application qualifications by September 2018 but are found to be unqualified, authorization for admission will be revoked even if they have passed the examination.

【Special consideration for persons with physical disabilities】

For persons with physical disabilities who may require special consideration when taking examinations, we will make efforts to offer assistance in accordance with their disabilities. Such persons are requested to contact us as soon as possible for further information.

《Contact Information》

The University of Kitakyushu, Administrative Office,
Academic Service Department Division II Entrance Examination Division
Address: 1-1 Hibikino, Wakamatsu-ku, Kitakyushu, Fukuoka 808-0135
TEL: 093-695-3340 E-mail: nyushi@kitakyu-u.ac.jp

5. Examination Subjects and Selection Method

【Examination Subjects】

◆ Graduate Programs in Environmental Systems

○Chemical Processes and Environments

○Environmental Biosystems

Division	Examination Subjects	Time
Special Selection for International Students	Oral examinations · Interview (Including a presentation concerning previous research results and a research plan for Graduate School)	13 : 30 -

※All examinations are given in English. Please provide all answers in English.

○Environment and Resources Systems (Note 1)

Division	Examination Subjects	Time
Special Selection for International Students	Oral examinations · Interview (Including an audiovisual presentation concerning previous research results and a research plan for Graduate School)	15 : 00 -

※All examinations are given in English. Please provide all answers in English.

(Note 1) If you have a document certifying your language skills in Japanese or English, please bring it to the examination day.

(Example: Your score in the Japanese Language Proficiency Test, TOEIC (TOEIC L & R) Score, TOEFL Score, etc.) ※ It is not mandatory.

◆ Graduate Programs in Environmental Engineering

○Mechanical Systems Engineering

Division	Examination Subjects	Time
Special Selection for International Students	Oral examinations · Interview (Master's thesis or previous research results)	13 : 30 -

※All examinations are given in English. Please provide all answers in English.

○Architecture

Division	Examination Subjects	Time
Special Selection for International Students	Oral examinations · Interview (Including an audiovisual presentation concerning previous research results and a research plan for Graduate School)	15 : 30 -

※This examination is given in English or Japanese.

English proficiency may also be checked if you choose Japanese.

◆ Graduate Programs in Information Engineering

○Communications and Media Processing

○Computer Systems

Division	Examination Subjects	Time
Special Selection for International Students	English (Note 1) (Note 2)	–
	Oral examinations, Interview (Including an audiovisual presentation concerning previous research results and a research plan for Graduate School)	13 : 30 –

※All examinations are given in English. Please provide all answers in English.

(Note 1) TOEIC(TOEIC L&R) or TOEFL test scores will be used in place of an English exam.

(Note 2) Students may be exempted from this subject based on their academic or research history, or if they have a refereed paper in English. (Refer to page 7 for details.)

【Selection Method】

The results of the examination and a consideration of the application documents are the basis for selection.

6. Examination Site

The University of Kitakyushu, Hibikino Campus
(1-1 Hibikino, Wakamatsu-ku, Kitakyushu, Fukuoka)

※Refer to the Map on the back cover of this admission guide.

※Means of transportation: Kitakyushu City Bus

Take City bus No. 33, 35 or 63 bound for Gakken-toshi or No. 64 bound for Futajima Station from JR Orio Station, West Exit bus stop, and get off at Gakken-toshi-Hibikino. It takes about 20 minutes.

(Kitakyushu Municipal Traffic Bureau Wakamatsu Office Tel: 093-771-2765
Mukaida Office Tel: 093-691-0131)

7. Notes about the Examination

- (1) Make sure to bring your Test Registration Card. If you have not received the card three days prior to the examination date, contact our Academic Service Department Division II Entrance Examination Division (See the back cover). For the examinees who live in abroad, we will issue “an examination permit” and send you it.
- (2) You will not be allowed to take the examination if you enter the room more than 20 minutes after the start of the exam. You will not be allowed to take the interview if you are late.
- (3) If you are late due to lengthy delays on the public transportation service, the examination time will be extended as necessary. To verify the delay, get a note of verification when you get on/off the train or bus.
- (4) Bring your pens and pencils, wrist watch (without calculation, translation, and dictionary functions). We cannot provide any test-taking materials.
- (5) Do not come to the test site by car.

【Exemptions for the English Examination】 (For those who prefer screening only)

English examination exemption screenings are conducted individually before application as follows. Contact the administrative office stated below for details.

I. Documents for Submission

- Application Form (Form 1)
- English Examination Exemption Application Form (Form7)
- Copy of a refereed paper in English (one or more)

II. Application Deadline

Submit by: May 1 (Tue), 2018

III. Submit to:

The University of Kitakyushu, Administrative Office,
Academic Service Department Division II Entrance Examination Division
(Refer to Section 4, “Application Procedures”)

※If you send the documents by mail, use EMS (Express Mail Service), and specify
“English exemption application enclosed” on the envelope in red.

IV. Notification of the Results

To be forwarded to the applicant by mail.

《Contact Information》

The University of Kitakyushu, Administrative Office,
Academic Service Department Division II Entrance Examination Division
Address: 1-1 Hibikino, Wakamatsu-ku, Kitakyushu, Fukuoka 808-0135
TEL: 093-695-3340 E-mail: nyushi@kitakyu-u.ac.jp

8. Announcement of Successful Applicants

The successful examinees' application numbers will be posted as follows. A notification of authorization for admission will also be forwarded. The School will not accept any telephone inquiries regarding the results.

Date & Time	July 11(Wed), 2018 9 a.m. (at 10 a.m. on the website)
Locations	The University of Kitakyushu, Hibikino Campus, Wood Deck Terrace Bulletin Board The University of Kitakyushu, web site (http://www.kitakyu-u.ac.jp/)

9. Admission Procedures

Persons receiving notification of authorization for admission must complete the required admission procedures during the period stated below at Hibikino Campus of the School. Instructions regarding admission procedures will be forwarded along with the notification of authorization for admission.

Period	July 17 (Tue) , 2018 – July 20 (Fri), 2018 (Scheduled)
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- Once paid, no admission fees will be returned under any circumstances.
- Persons who do not complete the admission procedures during this time will be deemed as having opted out of admissions. The admission procedure period will not be extended, under any circumstances.
- Persons who complete the payment of the admission fees and submission of the necessary documents during the period will be admitted.
- The Test Registration Card is necessary for the admission procedures. It is important that you keep it safe.

10. Fees Related to Admission (Note 1)

Fee	Amount	Note
Admission	Residents of Kitakyushu City 282,000 yen	(See Note 2 below)
	Non-residents of Kitakyushu City 423,000 yen	
Alumni Association Fee	50,000 yen	Those who have graduated from this School and have already paid are exempt.
Accident Insurance	Three years' coverage 2,600 yen	

(Note 1) The amounts indicated above are those for 2018 enrollment, and may possibly change.

(Note 2) A resident of Kitakyushu City is defined as a person certified to be a Kitakyushu City taxpayer or exempted taxpayer (or someone whose spouse or other close relative is so certified) during the year prior to enrollment and, who is also a resident of Kitakyushu City when the admission fee is paid. To be a "taxpayer (or an exempted taxpayer) of Kitakyushu City in the previous year of the enrollment", he/she must have been a resident of Kitakyushu City as of January 1, 2017.

※ Even if you do not pay the alumni association fee or the insurance, you can still enter the university.

1 1. Tuition Fees

Annual fee 535,800 yen

- (1) The amount indicated is the current fee. If the amount or the payment method is changed while you are enrolled, the new rules shall be applied from the time of the amendment.
- (2) The tuition fee must be paid by account transfer in two installments on the due date (or the next business day if the bank is closed on that date).

1 2. Security Export Control Regulations

Based on the Foreign Exchange and Foreign Trade Act, the University of Kitakyushu has set forth the “Security Export Control Regulations at the University of Kitakyushu”, carrying out strict screening of international students in accepting them.

Please note that applicants might not be eligible for the education or conduct research they desire to if their chosen field is subject to any provisions of the regulations.

[References] URL:

Japanese <http://www.meti.go.jp/policy/anpo/>

English <http://www.meti.go.jp/policy/anpo/englishpage.html>

II April 2018 Enrollment

1. Schedule

Application Deadline	From May 17 (Thu) , 2018 to May 25 (Fri), 2018
Test Registration Card Delivery Date	Around May 30 (Wed), 2018
Test Date	July 1 (Sun), 2018 * In the event that the entrance examinations cannot take place as scheduled due to an emergency, there will be an announcement on the website. Website: http://www.kitakyu-u.ac.jp/env/
Test Site	The University of Kitakyushu Hibikino Campus (1-1 Hibikino, Wakamatsu-ku, Kitakyushu, Fukuoka)
Notification of Results	July 11 (Wed), 2018
Admission Procedure	From December 17 (Mon) , 2018 to December 20 (Thu), 2018 (Scheduled)

2. Expected Enrollment Numbers

Faculty	Major	Number of International Students Accepted
Graduate School of Environmental Engineering	Graduate Programs in Environmental Systems	a few
	Graduate Programs in Environmental Engineering	a few
	Graduate Programs in Information Engineering	a few

3. Requirements for Eligibility

Special Selection for International Students

Those who have completed 16 years of school education outside Japan and meet any of the requirements from (1) to (3).

- (1) Those who have obtained, or are expected to obtain a Master's degree by March 31, 2019.
- (2) Those who have been conferred, or are expected to be conferred, a degree corresponding to a Master's degree outside Japan by March 31, 2019.
- (3) Those who are 24 years old or older as of March 31, 2019, whom the Graduate School has recognized, through screening of entrance qualifications, as having academic abilities equivalent to having obtained a Master's degree. ^(Note)

(Note) Entrance qualifications are screened for those who intend to apply under requirement (3) before submission of the application.

Refer to 【Entrance Qualifications Screening】 (page 11)

<<Important Notice Regarding Admission>>

If your current resident status is not College Student (e.g. Short-term stay, Pre-college Student, etc.), After completing the enrollment procedures (or after receiving official notice from the university that your application has been successful) you must change your residence status to College Student (Ryugaku) or obtain a College Student visa at the Immigration Bureau of the Ministry of Justice.

【Entrance Qualifications Screening】 (for those of whom it is required)

A faculty committee screens the entrance qualifications as follows. Contact the administrative office indicated below for details.

I. Documents for Submission

- Application Form (Form 1)
- Research Plan Survey (Form 5)
- Entrance Qualifications Screening Application Form (Form 6)
- Official transcripts from the Master's course you attended or you are attending
- Specifics of previous academic performances and research

II. Application Deadline

Submit by: May 1 (Tue), 2018

III. Submit to:

The University of Kitakyushu, Administrative Office,
Academic Service Department Division II Entrance Examination Division
(Refer to Section 4, "Application Procedures")

※If you send the documents by mail, use EMS (Express Mail Service) and specify
"Entrance Qualifications Screening Application enclosed" on the envelope in red.

IV. Notification of the Results

To be forwarded to the applicant by mail.

《Contact Information》

The University of Kitakyushu, Administrative Office,
Academic Service Department Division II Entrance Examination Division
Address: 1-1 Hibikino, Wakamatsu-ku, Kitakyushu, Fukuoka 808-0135
TEL: 093-695-3340 E-mail: nyushi@kitakyu-u.ac.jp

4. Application Procedures

Applications must be submitted in person at the address indicated below or by mail through EMS (Express Mail Service) to the Administrative Office. Enclose all documents for submission in an envelope (which you must provide), and submit it before the application deadline. Specify "Application for Graduate School Enclosed" in red on the front of the envelope, and your name, address, and postal code on the back of the envelope.

(1) Application Period: From May 17 (Thu), 2018 to May 25 (Fri), 2018

(2) Application Submission Office Hours:(Except Saturdays & Sundays & public holidays)

(Submitting in person) Monday – Friday: 8:30 a.m. – 4:00 p.m.
(until 5:00 p.m. on May 26)
(Lunch break: 12:15 p.m. – 1:15 p.m.)

(By mail) Applications arriving on May 26 (Sat), 2018 or later will be considered valid only if they are postmarked on or before May 24 (Thu), 2018.

(3) Submit or mail to:

The University of Kitakyushu, Administrative Office,
Academic Service Department Division II Entrance Examination Division
Address: 1-1 Hibikino, Wakamatsu-ku, Kitakyushu, Fukuoka 808-0135
TEL: 093-695-3340 E-mail: nyushi@kitakyu-u.ac.jp

(4) Documents for Submission (See below)

Documents	Notes
Application Form [Form 1 (For April 2019 Enrollment)]	Fill in all the necessary items within the bold lines on the included form designated by the School. (* Both sides) Attach a 4cm×3cm photo, either color or black & white, showing your upper body, without a hat or background, looking straight ahead and with your name written on the back.
Test Admission Card [Form 2]	Fill in all the necessary items within the bold lines on the included form specified by the School.
Photo Card [Form 3]	Fill in all the necessary items within the bold lines on the included form designated by the School. Attach the photo as described in the “Application Form”.
Name & Address Cards [Form 4]	Fill in either address card for domestic residents or overseas residents. Make sure you can receive the test admission card, the Notification of acceptance, and any other admission-related documents.
Official Transcripts of Master’s Course or Others	Those who have graduated or are expected to graduate from Graduate School (Master’s course) by March 31, 2019 should submit an official transcript issued by the Graduate School. * Those who have not graduated from Graduate School (except those who are expected to graduate in March 2019) should submit a transcript from their previous school. * For certificates written in a language other than Japanese or English, a Japanese or English translation must be attached.
Documents Verifying the Application Qualifications	Certificate of graduation from Graduate School (Master’s course) or Certificate of prospective graduation (or Student Registration Certificate) * Including those who have a degree in a foreign country that corresponds to a Master’s degree in Japan. 【For those who have not obtained a Master’s degree】 * A copy of the notification of application qualification issued after the advance screening by our faculty committee.
Research Plan Survey [Form 5]	Clearly print a statement of your research plan on the pull-out form designated by the School for which you are applying. * State your reasons for application as specified in the form. * Before applying, you must contact the professor by whom you wish to be supervised.
Examination Fees (¥ 30,000) ※Japanese YEN only	Remit 30,000 yen to the account specified below, and send a copy of the “Application of Remittance” form along with your application. Bank name : The Bank of Fukuoka, Ltd Bank code (Swift Code) : FKBKJPJT Branch name: Kitakyushu Main Office Bank account number : 2555152 Name of the account : Kouritsudaigakuhoujin kitakyushushiritsudaigaku Rijichou Tsuda Junji * Paying bank transfer fee : Borne by remitter (Important!) There are cases where the actual amount we receive is short by bank transfer fee. Then you will need to make another remittance for the shortage, and pay the bank transfer fee another time as well. Therefore, please make sure that the bank remittance fee is added on the top of the required amount to remit.

<p>Any one of the followings: TOEIC (TOEIC L&R) Official Score Certificate, TOEIC (TOEIC L&R)-IP Test Score Report, or TOEFL-iBT Score Report.</p> <p>* Only "Communications and Media Processing", "Computer Systems" are required to submit the score.</p>	<p>Scores must be from tests taken within 24 months from the month that the application period starts.</p> <p>Applicants applying to courses that require submission of test scores must submit their scores. (See 5. Examination Subjects and Selection Method)</p> <p>(1) Applicants who wish to use their TOEIC (TOEIC L&R) public test scores must submit their original Official Score Certificate and a copy.</p> <p>(2) Applicants who wish to use their TOEIC (TOEIC L&R)-IP (Institutional Program) test scores must submit their original Score Report and a copy.</p> <p>(3) Applicants who wish to use their TOEFL-iBT test scores must submit their original Test-Taker Score Report and a copy.</p> <p>* Only scores from TOEIC (TOEIC L&R)-IP tests administered by this university or university co-operative will be accepted.</p> <p>* Applicants submitting scores for the TOEFL-iBT test must submit their Test-Taker Score Report. Official Score Reports will not be accepted.</p> <p>* Submitted original documents will be returned to applicants by post, enclosed with their Test Registration Card, or on the day of the examination.</p> <p>* If applicants cannot submit test scores from (1) to (3) above with their application, a copy of admission ticket of TOEIC (TOEIC L&R) or TOEFL must be submitted. In addition, both the original and a copy of such scores must be submitted at any time up to the day before the examination (excluding Saturdays, Sundays, and Japanese public holidays).</p> <p>* Applicants who submitted test scores with their application but have retaken the test and obtained a higher score may resubmit their new scores at any time up to the day before the examination (excluding Saturdays, Sundays, and holidays).</p>
<p>Certificate of Residence or Copy of Passport</p>	<p>Applicants residing in Japan : a Certificate of Residence (Juminhyo) issued within one month prior to their application.</p> <p>Applicants residing in abroad : a copy of the pages in their passport that show the passport holder's photograph and passport expiration date.</p>

【Notes】

- After submission of the application, no examination fees will be returned, and no changes to documents will be accepted, under any circumstances.
- If a false statement is found in the documents, authorization of admission will be revoked.
- After submission of the application, no documents will be returned.
- As for those who have taken the examination under the condition that they were expected to meet the application qualifications by March 2019, but are found to be unqualified, authorization for admission will be revoked even if they have passed the examination.

【Special consideration for persons with physical disabilities】

For persons with physical disabilities who may require special consideration when taking examinations, we will make efforts to offer assistance in accordance with their disabilities. Such persons are requested to contact us as soon as possible for further information.

《Contact Information》

The University of Kitakyushu, Administrative Office,
Academic Service Department Division II Entrance Examination Division
Address: 1-1 Hibikino, Wakamatsu-ku, Kitakyushu, Fukuoka 808-0135
TEL: 093-695-3340 E-mail: nyushi@kitakyu-u.ac.jp

5. Examination Subjects and Selection Method

【Examination Subjects】

◆ Graduate Programs in Environmental Systems

○Chemical Processes and Environments

○Environmental Biosystems

Division	Examination Subjects	Time
Special Selection for International Students	Oral examinations · Interview (Including a presentation concerning previous research results and a research plan for Graduate School)	13 : 30 -

※All examinations are given in English. Please provide all answers in English.

○Environment and Resources Systems (Note 1)

Division	Examination Subjects	Time
Special Selection for International Students	Oral examinations · Interview (Including an audiovisual presentation concerning previous research results and a research plan for Graduate School)	15 : 00 -

※All examinations are given in English. Please provide all answers in English.

(Note 1) If you have a document certifying your language skills in Japanese or English, please bring it to the examination day.

(Example: Your score in the Japanese Language Proficiency Test, TOEIC (TOEIC L & R) Score, TOEFL Score, etc.) ※ It is not mandatory.

◆ Graduate Programs in Environmental Engineering

○Mechanical Systems Engineering

Division	Examination Subjects	Time
Special Selection for International Students	Oral examinations · Interview (Master's thesis or previous research results)	13 : 30 -

※All examinations are given in English. Please provide all answers in English.

○Architecture

Division	Examination Subjects	Time
Special Selection for International Students	Oral examinations · Interview (Including an audiovisual presentation concerning previous research results and a research plan for Graduate School)	15 : 30 -

※This examination is given in English or Japanese.

English proficiency may also be checked if you choose Japanese.

◆ Graduate Programs in Information Engineering

○Communications and Media Processing

○Computer Systems

Division	Examination Subjects	Time
Special Selection for International Students	English (Note 1) (Note 2)	–
	Oral examinations, Interview (Including an audiovisual presentation concerning previous research results and a research plan for Graduate School)	13 : 30 –

※All examinations are given in English. Please provide all answers in English.

(Note 1) TOEIC(TOEIC L&R) or TOEFL test scores will be used in place of an English exam.

(Note 2) Students may be exempted from this subject based on their academic or research history, or if they have a refereed paper in English. (Refer to page 7 for details.)

【Selection Method】

The results of the examination and a consideration of the application documents are the basis for selection.

6. Examination Site

The University of Kitakyushu, Hibikino Campus
(1-1 Hibikino, Wakamatsu-ku, Kitakyushu, Fukuoka)

※Refer to the Map on the back cover of this admission guide.

※Means of transportation: Kitakyushu City Bus

Take City bus No. 33, 35 or 63 bound for Gakken-toshi or No. 64 bound for Futajima Station from JR Orio Station, West Exit bus stop, and get off at Gakken-toshi-Hibikino. It takes about 20 minutes.

(Kitakyushu Municipal Traffic Bureau Wakamatsu Office Tel: 093-771-2765
Mukaida Office Tel: 093-691-0131)

7. Notes about the Examination

- (1) Make sure to bring your Test Registration Card. If you have not received the card three days prior to the examination date, contact our Academic Service Department Division II Entrance Examinations Division (See the back cover). For the examinees who live in abroad, we will issue “an examination permit” and send you it.
- (2) You will not be allowed to take the examination if you enter the room more than 20 minutes after the start of the exam. You will not be allowed to take the interview if you are late.
- (3) If you are late due to lengthy delays on the public transportation service, the examination time will be extended as necessary. To verify the delay, get a note of verification when you get on/off the train or bus.
- (4) Bring your pens and pencils, and a wrist watch (one without calculation, translation, and dictionary functions). We cannot provide any such test-taking necessities.
- (5) Do not come to the test site by car.

【Exemptions for the English Examination】 (For those who prefer screening only)

English examination exemption screenings are conducted before application as follows. Contact the administrative office stated below for details.

I. Documents for Submission

- Application Form (Form 1)
- English Examination Exemption Application Form (Form7)
- Copy of a refereed paper in English (one or more)

II. Application Deadline

Submit by: May 1 (Tue), 2018

III. Submitted to:

The University of Kitakyushu, Administrative Office,
Academic Service Department Division II Entrance Examination Division
(Refer to Section 4, “Application Procedures”)

※If you send the documents by mail, use EMS (Express Mail Service), and specify
“English exemption application enclosed” on the envelope in red.

IV. Notification of the Results

To be forwarded to the applicant by mail.

《Contact Information》

The University of Kitakyushu, Administrative Office,
Academic Service Department Division II Entrance Examination Division
Address: 1-1 Hibikino, Wakamatsu-ku, Kitakyushu, Fukuoka 808-0135
TEL: 093-695-3340 E-mail: nyushi@kitakyu-u.ac.jp

8. Announcement of Successful Applicants

The successful examinees' application numbers will be posted as follows. A notification of authorization for admission will also be forwarded. The School will not accept any telephone inquiries regarding the results.

Date & Time	July 11(Wed), 2018 9 a.m. (10 a.m. on the website)
Locations	The University of Kitakyushu, Hibikino Campus, Wood Deck Terrace Bulletin Board The University of Kitakyushu, web site (http://www.kitakyu-u.ac.jp/)

9. Admission Procedures

Persons receiving notification of authorization for admission must complete the required admission procedures during the period stated below at the Hibikino Campus of the School. Instructions regarding admission procedures will be forwarded along with the notification of authorization for admission.

Period	December 17(Mon) , 2018 – December 20(Thu), 2018 (Scheduled)
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- Once paid, no admission fees will be returned under any circumstances.
- Persons who do not complete the admission procedures during this time will be deemed as having opted out of admissions. The admission procedure period will not be extended, under any circumstances.
- Persons who complete the payment of the admission fees and submission of the necessary documents during the period will be admitted.
- The Test Registration Card is necessary for the admission procedures. It is important that you keep it safe.

10. Fees Related to Admission (Note 1)

Fee	Amount	Note
Admission	Residents of Kitakyushu city 282,000 yen	(See Note 2 below)
	Non-residents of Kitakyushu city 423,000 yen	
Alumni Association Fee	50,000 yen	Those who have graduated from this School and have already paid are exempt.
Support Association Fee	30,000 yen	Those who have graduated from this School and have already paid are 25,000yen.
Accident Insurance	Three years' coverage 2,600 yen	

(Note 1) The amounts indicated above are those for 2018 enrollment, and may possibly change.

(Note 2) A resident of Kitakyushu City is defined as a person certified to be a Kitakyushu City taxpayer or exempted taxpayer (or someone whose spouse or other close relative is so certified) during the year prior to enrollment and, who is also a resident of Kitakyushu City when the admission fee is paid. To be a "taxpayer (or an exempted taxpayer) of Kitakyushu City in the previous year of the enrollment", he/she must have been a resident of Kitakyushu City as of January 1, 2018.

※ Even if you do not pay the alumni association fee or the support association fee or the insurance, you can still enter the university.

1 1. Tuition Fees

Annual fee 535,800 yen

- (1) The amount indicated is the current fee. If the amount or the payment method is changed while you are enrolled, the new rules shall be applied from the time of the amendment.
- (2) The tuition fee must be paid by account transfer in two installments on the due date (or the next business day if the bank is closed on that date).

1 2. Security Export Control Regulations

Based on the Foreign Exchange and Foreign Trade Act, the University of Kitakyushu has set forth the “Security Export Control Regulations at the University of Kitakyushu”, carrying out strict screening of international students in accepting them.

Please note that applicants might not be eligible for the education or conduct research they desire to if their chosen field is subject to any provisions of the regulations.

[References] URL:

Japanese <http://www.meti.go.jp/policy/anpo/>

English <http://www.meti.go.jp/policy/anpo/englishpage.html>

《Syllabus》

Specifics about courses are available at the internet syllabus system of the University of Kitakyushu:

※Partial change may be made in course name change and curriculum reorganization in 2019.
<https://gak-rsweb.kitakyu-u.ac.jp/SyllabusAppWeb2/sof/sof102/>

Doctoral Program

12 credits are required to complete.

《Details》 Earn the credits of the following subjects.

- 6 or more credits from Specialized Subjects, (credits can be earned from other courses or other programs.)
- 6 credits from Special Research Subjects.

【Graduate Programs in Environmental Systems】

《Specialized Subjects》 (2 credits each)	
<ul style="list-style-type: none"> ● <u>Advanced Polymer Chemistry</u> ● <u>Advanced Solid State Materials Chemistry</u> ● <u>Advanced Separation and Purification Engineering</u> ● <u>Spectroscopic Analysis</u> ● <u>Advanced Energetic Chemistry</u> ● <u>Advanced Reaction Design and Engineering</u> ● <u>Advanced Kinetics and Reaction Engineering</u> ● <u>Advanced Process Design</u> ● <u>Advanced Applied Catalysis</u> ● <u>Advanced Materials Systems</u> ● <u>Special Lectures on Chemical Processing for the Environment</u> ● <u>Advanced Environmental Materials Engineering</u> ● <u>Advanced Ecological and Environmental Physiology</u> ● <u>Advanced Functional Microbiology</u> ● <u>Advanced Biophysics</u> ● <u>Advanced Computational Chemistry</u> ● <u>Advanced Biomaterials</u> 	<ul style="list-style-type: none"> ● <u>Advanced Biosensor Engineering</u> ● <u>Advanced Ecological Management</u> ● <u>Advanced Environmental Biology</u> ● <u>Advanced Molecular and Cellular Biosciences</u> ● <u>Advanced Geochemistry</u> ● <u>Advanced Urban Environmental Management</u> ● <u>Advanced Environmental Policy and Administration</u> ● <u>Advanced Sustainable Management</u> ● <u>Advanced Environmental Information Technology and Computer Simulation</u> ● <u>Advanced Environmental Chemistry</u> ● <u>Advanced Environmental Preservation Engineering</u> ● <u>Advanced Recycle Engineering</u> ● <u>Advanced Aquatic Environment Engineering</u> ● <u>Advanced Environmental Modeling and Strategies for Sustainable Development</u> ● <u>Advanced Geosphere Environment Treatment</u> ● <u>Advanced Production Process Engineering</u> ● <u>Advanced Recycling System Engineering</u> ● <u>Advanced Studies in Environmental Pollution and Health Risks</u> ● <u>Advanced Sustainable Sanitation Engineering</u>
《Special Research Subjects》 (6 credits)	
<ul style="list-style-type: none"> ● <u>Special Research</u> 	

(Underline) The subjects underlined can instructed in English.

【Graduate Programs in Environmental Engineering】

《Specialized Subjects》 (2 credits each)	
<ul style="list-style-type: none"> ● <u>Special Lectures on Heat Power Systems</u> ● <u>Special Lectures on Flow Control Systems</u> ● <u>Special Lectures on Design Systems</u> ● <u>Special Lectures on Systems Engineering</u> ● <u>Special Lectures on Robotics</u> ● <u>Supervised Research on the Urban Environment and Ecological Design</u> ● <u>Supervised Research on the Environmental Design of Living Spaces</u> ● <u>Supervised Research on Environmentally Conscious Materials Engineering</u> 	<ul style="list-style-type: none"> ● <u>Supervised Research on Trans-Generational Architectural Design</u> ● <u>Supervised Research on Urban Environmental Engineering</u> ● <u>Supervised Research on Environmental Engineering in Architecture</u> ● <u>Supervised Research on Structural Analysis</u> ● <u>Supervised Research on Building Systems and Construction Methods</u> ● <u>Supervised Research on Building Facilities Systems</u> ● <u>Supervised Research on Building Materials</u> ● <u>Supervised Research on Low Carbon Architecture and Urban Design</u>
《Special Research Subjects》 (6 credits)	
● <u>Special Research</u>	

(Underline) The subjects underlined can instructed in English.

【Graduate Programs in Information Engineering】

《Specialized Subjects》 (2 credits each)	
<ul style="list-style-type: none"> ● <u>Advanced Adaptive Signal Processing</u> ● <u>Advanced Visual Information Processing</u> ● <u>Advanced Applied Pattern Recognition</u> ● <u>Advanced Information Security</u> ● <u>Advanced Image Processing</u> ● <u>Advanced Mobile Communication Systems</u> ● <u>Advanced Information and Communication Theory</u> 	<ul style="list-style-type: none"> ● <u>Advanced Combinatorial Optimization</u> ● <u>Advanced VLSI Physical Design</u> ● <u>Advanced Nonlinear Programming</u> ● <u>Advanced Applied Control Engineering</u> ● <u>Advanced Sensor Systems Engineering</u> ● <u>Advanced System Control Theory</u> ● <u>Advanced Network Architecture</u> ● <u>Advanced Medical Engineering</u>
《Special Research Subjects》 (6 credits)	
● <u>Special Research</u>	

(Underline) The subjects underlined can instructed in English.

【 Graduate Programs in Environmental Systems, : Specialized Subjects 】

Subjects	Details
Advanced Polymer Chemistry	Polymer materials, widely used in such daily necessities as clothes, rubber, and plastics or as advanced materials in electronics, nanotechnology, and biotechnology, have become indispensable in the modern society. Precision synthesis of high polymer compound has become crucial technology for advanced materials. Students learn most-advanced precision synthesis of high polymer referring to the latest study examples.
Advanced Solid State Materials Chemistry	This course provides mainly the relationship between solid structure and chemical bonding, and interaction between crystals that determines the physicality and electronic structure. Students can learn crystal structure, concepts of ion radius and lattice energy and therefore understand the relationship between solid characteristics and their structures. Students also learn various methods that characterize the structure and physicality of solids including X-ray diffraction, microscopy, thermal analysis, and magnetic measurement. Students will be able to understand that impurity atoms in crystal structure cause defects that significantly change the physical and chemical properties of solids. This course also covers some synthetic methods of solids that show interesting and useful characteristics.
Advanced Separation and Purification Engineering	Separation/purification of substances is a vital technology for precise qualitative/quantitative analysis of substances in the environment and for obtaining high-purity substances. In this course, students learn the basic concept and the practical examples of separation/purification engineering.
Spectroscopic Analysis	This course deals with a variety of analyses, including X-ray diffraction and other instrumental analyses necessary for structural identification and assessment of environmental samples, along with separation analysis, which is pretreatment technology.
Advanced Energetic Chemistry	Energy production through chemical reaction and its utilization is mostly the cause of the greenhouse gas emission, a main issue in the global environmental problems. In this course, students learn advanced approaches of chemical equilibrium and reaction kinetics in order to promote further understanding of industrial application of fossil fuel and renewable energy, and research and development of clean energy and energy recycling system. Students will acquire a technical foundation and an applied skill for efficient energy production and its effective utilization, which are indispensable for researchers and engineers of manufacturing industry.
Advanced Reaction Design and Engineering	This course provides technological development in the fields of resources, energy, petrochemical, and chemistry taking advantage of chemical principles and methodology to solve the environmental issues. This course focuses on the stages of manufacturing substances, or reaction design of processes so that the students can acquire the effective methods and principles that contribute to achieve environmentally friendly development of industry and to prevent pollution. This course cultivates practical researcher or academic leader specialized in the advanced environmental engineering.
Advanced Kinetics and Reaction Engineering	This course deals with a series of the processes that take place during the chemical reaction including collision among molecules, activation of molecules caused by collision energy, disaggregation of chemical bonding among atoms, rearrangement of atoms, inter-atomic bond creation, and diffusion of molecular products. Students learn the theories of the processes and the effect of reaction condition on each process. Referring to the examples of material manufacturing process using solid catalysis, in particular, among chemical processes, this course also provides theories concerning chemical reactions that proceed on the fluid surface and the role to catalysis design.
Advanced Process Design	The substance production processes using chemical and biological reactions are classified into reaction process and separation/purification process and the proper combination of each process is vital along with enhancing the efficiency of each process. Especially, as separation/purification process of product from reaction media or from by-product accounts for more than two thirds of the cost imposed on the entire process, appropriate selection of separation elements technology and its optimization is the key to practical application of the production process. In this course, students learn a variety of chemical and biological reaction processes, separation/purification process, and their operations and application areas, referring to the practical examples.

Subjects	Details
Advanced Applied Catalysis	Catalysis is indispensable for chemical reaction process. Lately, high performance catalysis is high in demand in environment improvement technology. This course deals with the roles of catalysis using practical examples, to apply the knowledge to utilizing catalysis or conducting catalytic processes.
Advanced Materials Systems	New technologies, such as nanotechnology and biotechnology that changed the fundamentals of the past material technology, have advanced rapidly affecting many fields including information communication, energy, environment and medical care. This course provides latest study examples concerning manufacturing methods and measurement technology for quantitative/qualitative analyses based on the advanced materials system provided during the Master's course.
Special Lectures on Chemical Processing for the Environments	Students learn the latest research concerning the development of most-advanced chemical processes and materials developing technology to acquire practical knowledge in order to respond to advanced progress in chemical technologies today.
Advanced Environmental Materials Engineering	Industrial materials such as metals, polymers and wood-based materials, and various other inorganic materials have brought great benefits to humankind. On the other hand, environmental pollution and destruction on a global scale have become attributable to those materials through the processes of production, usage and disposal. In particular, developing countries with large populations are experiencing both rapid economic development and serious impacts from environmental problems. This class provides the latest information on materials or technology concerning processes which reduce the load on the environment or proactively improve the environment. Students also engage in surveys to gain greater abilities which will enable them to suggest environmentally-friendly technologies.
Advanced Ecological and Environmental Physiology	The latest study cases both in Japan and abroad are introduced, mainly to promote discussion of the mechanisms of environmental response shown by plants, microorganisms and protists. In particular, students discuss physiological reactions which living organisms constituting an ecosystem exhibit in relation to short-term or mid-to-long-term environmental changes in nature, artificial changes in the environment such as pollution, and mutual interactions among living organisms of different species in an ecosystem.
Advanced Functional Microbiology	Microorganisms have long been used for fermented foods, and due to the recent rapid development of biotechnology, the functions of microorganisms have been applied in various industrial fields, not only in the food and pharmaceutical industry but also in the chemical industry and environmental cleanup businesses. Also, microorganisms are widespread, even living in extreme environments where higher plants and animals cannot exist. Industry has high hopes for greater utilization of such special functions of microorganisms. In this class, students deepen their knowledge concerning various functions of microorganisms and develop abilities needed for looking to the future of the microorganism industry.
Advanced Biophysics	From the field of biophysics, this class focuses on X-ray diffraction using radiated light and introduces topics ranging from basic theory to actual data analysis. Also, students aim to master Mathematica as a tool for mathematical manipulation.
Advanced Computational Chemistry	This course provides computational chemistry that has become widely used as a tool to understand chemical phenomenon. Students receive training in molecular orbital calculation using Excel to understand the basic theory of computational chemistry and in practical applications of computation using typical computational chemistry software.
Advanced Biomaterials	Biocompatible materials are essential for medical equipment, regenerative medicine, medical technology such as artificial organs, and basic research such as cell culture. In this class, students gain an understanding of what biomaterials are, reactions between artificial materials and living materials or between cells, and the kinds of biocompatible materials and their features. Also, they delve into the current trends in the latest topics on design and utilization of biomaterials.

Subjects	Details
Advanced Biosensor Engineering	In this course, students learn the molecular mechanism of reception, transmission and processing of life information by cells and genes, receive training in manufacturing technology for developing a device of life information measurement, and acquire knowledge concerning the design concept of the system for measuring bio elements and bio measurements. This course mainly provides: (1) Expression of life information and molecular mechanism; (2) Production methods of micro nano-devices using Micro Electro Mechanical System (MEMS) technology; (3) Design examples of bio elements and bio electronics system ① DNA sensor ② Cell device ③ Nervous elements device ④ Antigenic– antibody sensor.
Advanced Ecological Management	This class covers the methods of preservation and management of ecosystems, mainly the ecological perspective but also from other perspectives such as engineering, agronomy and biology. Taking into consideration the functions of populations and communities, and mutual interactions between chemical environmental factors and biofunctions, students discuss research on the impact that the soil environment and inland water environment impose on living organisms, environment-forming processes of living organisms, and mutual interactions between living organisms and the environment from perspectives of cell function and molecular biology, including the latest research results.
Advanced Environmental Biology	This class examines natural phenomena and contamination phenomena associated with human factors in water environments, particularly interactions between eutrophication, organic contamination and ecosystems. Students discuss how to address aquatic environmental issues including management of water quality and sediments, ecosystem conservation and environmental restoration methods. Also, they deepen their understanding of impacts that environmental changes have made on ecosystems and discuss how to solve the recent water environmental issues affecting Japan and other parts of Asia.
Advanced Geochemistry	Spanning over 10,000 years up to the present, our climatic environment has been a very stable period of the earth's history. As global warming increases, how will earth's future climate system change? Cores excavated from ice sheets in Greenland and Antarctica have provided information on sudden cold shifts or shifts to a warmer climate. The future can be anticipated from the history of the earth. In order to figure out the puzzles of the history of the globe, knowledge and technology concerned with geochemistry, such as stable isotopes, are needed. This class introduces interesting knowledge about the earth's history that has been discovered from within ice.
Advanced Molecular and Cellular Biosciences	Recent advances in molecular and cell biology area are amazed. It is required to check the recent research projects, articles, and reviews to follow the advances. In this class, students aim at deeply understanding the advances through survey, presentation, and discussion about the recent national projects and articles. Furthermore, students discuss, present, and write proposal about future research projects. Attainable goal of this class is that students deeply understand the molecular and cell biology and make new research proposals of this area.
Advanced Urban Environmental Management	If cities in developing countries regard the success and failure of the preceding examples of environmental countermeasures taken by other countries including Japan to apply them to their present situations, they can avoid the serious environmental pollutions that Japan has ever experienced. Moreover, they can perform efficient environmental countermeasures by taking latecomer's advantages. Students perform comparative study of cities in Japan and Asian countries regarding the formation mechanism of environmental issues and their countermeasures; and then, consider the possibility of transferring it to developing countries mainly in Asia.
Advanced Environmental Policy and Administration	Based on articles from academic journals and other documents from Japan and abroad, this lecture reviews the latest trends in environmental policies and explores its evaluation and future directions. In the classes, each student in turn selects a topic in the environmental field, gives a presentation and leads a discussion on that topic, before making a report of final results. Typical topics include global environment and environmental management, regional environment and environmental management, environmental management systems in companies and other organizations, actual environmental effects assessment and its challenges, development and the environment in developing countries, and international cooperation in environmental matters.

Subjects	Details
Advanced Sustainable Management	Corporations have changed in attitude toward environment by becoming positive or active rather than responsive. To be more specific, the traditional environmental business of combating pollution by means of end-of-pipe systems has grown into design/production of environmental-conscious products, operation using recyclable/zero-emission technology, and service industry that bear the part of the system in the financial/information sectors in the environmentally-friendly society. Students receive training in the practical methods of product development and management strategy in this course.
Advanced Environmental Information Technology and Computer Simulation	The system technology of the environmental information such as geographical information system (GIS), digital database development including digitalized national information and vegetation data, and environmental monitoring methods using sensors and wireless technology has been rapidly evolving. Students survey the latest situation of technological development and applied cases through research papers, attending symposium and exhibitions, or visiting corporations, to grasp the actual conditions and discuss possible future measures.
Advanced Environmental Chemistry	Students learn the physiochemical characteristics of chemical substances and their response and degradability, based on which, they also learn how the chemical substances disposed or emitted to the environment move or diffuse into the environment and accumulated in human beings or living beings. Students further extend the knowledge and acquire technology required for obtaining the concentration of chemical substance including the latest analytic methods and analytical precision control, stochastic method for chemical substance exposure amount, and risk assessment of chemical substances by means of exposure amount and toxicity value, referring to the actual examples.
Advanced Environmental Preservation Engineering	This course provides the principle, function, and characteristics of environment-related devices and processes including environmental measurement, environmental preservation, environmental cleanup, water purification processing, sewage treatment, industrial wastewater treatment, intermediate treatment for waste, and final disposal of waste. Students also learn the operation and maintenance of such devices and processes, and solution to problems involving them, along with the latest technology and devices. Students receive training in designing new environmental devices or systems for the future or those suited to conditions of Japan or regions.
Advanced Recycle Engineering	In order to establish a sound, sustainable material-cycle society on earth as a whole, it is important to consider a reasonable waste and wastewater treatment system that does not place significant burdens on the environment. In this class, students study in depth how to explain about waste and wastewater treatment systems from the point of view of chemical engineering, by using a simulator as knowhow for optimizing and assessing a system. The components of waste and wastewater are complicated, and in addition a treatment system is composed of various unit processes. Process computing skills enable students to understand such complexities in terms of mathematics and to determine an appropriate system.
Advanced Aquatic Environment Engineering	This course provides regional environments from the perspective of hydrologic circulation by referring to its elements including land utilization, precipitation, water outflow, matter flow, response of receiving water area, water quality change, and water utilization to understand their effects on efficiency and marine area. Students, then, integrate these elements to acquire the regional management methods for river basins. Students pick up a river basin from Asian countries or Japan; apply the methods to acquire skills in realizing the coexistence of development/utilization and water environment in the actual conditions.
Advanced Environmental Modeling and Strategies for Sustainable Development	This class considers the concept of sustainable economic and social systems coexisting with the environment. Global environmental conservation involves various parties, including consumers, companies, local governments and nations. But behavioral principles vary in each of these cases, which means it is not easy to take concerted action for environmental conservation. Students learn how to model the interactions among parties and impacts on the environment, and how to predict outcomes of various environmental policies. Emphasis will be placed on detailed surveys and presentations by students.

Subjects	Details
Advanced Geosphere Environment Treatment	In this course, students learn the natural and human-induced effects on the soil environment, especially, the effects of pollution caused by heavy metals and persistent substances on biota and human beings. This course promotes further understanding as to how to address geosphere environmental issues and risk management using practical methods. Students receive training in advanced skills and organizing systematic measures for preserving soil environment including that of Asia.
Advanced Production Process Engineering	In the process of manufacturing goods, effective use of resources and energy is required. In this class, students learn detailed approaches for attaining highly efficient production and discuss recently-implemented, sophisticated technologies and their practical use. Also covered are future directions for newly developed technology and methods. The class includes topics such as sophisticated process design, multiple machine tool use, sophisticated production design, high-efficiency production methods, advanced quality management and advanced preventive maintenance.
Advanced Recycling Systems Engineering	The class introduces research and case studies concerning developments in recycling technology necessary for establishing a sound material-cycle society, and examines the topics from engineering perspectives. It also introduces recycling technology for practical use and considers the future directions of R&D and technological development. Also covered are ways of thinking about recycling, crushing technology as pretreatment (shredding and crushing), physical separation technology (sorting, gravity, magnetism, and electricity), refining technology (aluminum and copper) and introduction of recycling technology (automobiles, home electric appliances, and packaging containers).
Advanced Studies in Environmental Pollution and Health Risks	Students acquire essential knowledge regarding characteristics of water, air and resource circulation and the relationships with public hygiene, which will be needed by government and corporate officials dealing with environmental measures, and developers of environmental technology. The class covers water purification and water quality, arsenic contamination of drinking water, air pollution and health risks, disasters and health risks, and principles and examples of epidemiological research. Also, in order to increase knowledge applicable in the field, the class provides training in drinking water tests and a technical tour of facilities for water purification and air pollution monitoring in the vicinity of Kitakyushu. Students gain deep understanding of the management of health risks through surveys conducted by students and active discussions among students.
Advanced Sustainable Sanitation Engineering	In this class, students study energy-and-resource-conserving sanitation engineering and purification treatment engineering in developing countries and emerging countries. The class covers such topics as resource conservation technology in a waterworks system, the development processes concerning water treatment in Japan, the current situation of wastewater treatment in developing countries in Asia, and energy-and-resource-saving water treatment. Also, each student makes a detailed survey on an assigned topic. Through active discussions among students themselves, and discussions including both students and the teacher, future perspectives on appropriate sanitation engineering systems for the various Asian countries are explored.

【 Graduate Programs in Environmental Systems: Special Research Subjects 】

Subjects	Details
Special Research	The adviser undertakes the task of directing the student to create a doctoral thesis and enhance the student's capability to perform independent research activity. To be more specific, the adviser, in corporation with the student, sets a special research theme in accordance with the student's study subject, taking the helm on creating the research plan and method, and gives overall guidance according to the student's specialized area and study theme.

【 Graduate Programs in Environmental Engineering: Specialized Subjects 】

Subjects	Details
Special Lectures on Heat Power Systems	<p>Analyzing techniques of thermal performance on systems of gas and steam power are lectured.</p> <p>In gas power system the combustion phenomena in internal combustion engines based on Otto cycle or Diesel cycle is introduced. HCCI combustion and PCCI combustion which are key technologies for improvement of thermal efficiency and reduction of exhaust emissions are focused.</p> <p>In steam power system, differences between Rankin cycle and real cycle are lectured and methods for reduction of the thermal efficiency are discussed with the second law of thermodynamics. Moreover application of co-generation system and combined power cycle is discussed.</p> <p>The aim of this course is to obtain the ability to thermodynamically analyze the performance on the systems of gas and steam power.</p>
Special Lectures on Flow Control Systems	<p>Controlling the fluid flow, reducing the flow resistance on moving object, preventing flow detachment, or enhancing efficiency of fluid machinery is technologically crucial. This course provides conventional fluid control system including absorption and blowing method of boundary layer, and trip wire. Students also learn the latest fluid control system including passive control of shock wave to enhance the blade performance of transonic region and active noise control for reducing the noise.</p>
Special Lectures on Design Systems	<p>This advanced lecture examines material dynamics concerned with deformation, strength and destruction of materials in designing machine structures. The class deals with the latest design and processing techniques for various industrial products which have high environmental compatibility. Recent theory and techniques for safety of machine structures are covered, as well as recent topics on how to detect and judge fatigue damage of machine structures, and there will be discussions as well of important scholarship on recent theory and techniques of optimization design methods.</p>
Special Lectures on Systems Engineering	<p>Systems engineering is a subject concerning expression, analysis, design, control, assessment, optimization, reliability, and safety for various systems. This class focusing on mechanical systems such as robots or automobiles will deepen students' knowledge of systems engineering mainly through reading literature in rotation.</p>
Special Lectures on Robotics	<p>Robot is the system that consists of various technology.</p> <p>In this lecture, the details of sensors, actuators, and information processing systems which constitutes the robot are explained. Examples of various robot applications are also introduced.</p>
Supervised Research on the Urban Environment and Ecological Design	<p>This course deals with the concept, effect, and difficulty of design process referring to the actual examples of designing urban spaces. Students also learn ecological design application through study examples of ecological cities, which is closely related to architectural designs, in addition to today's urban theory such as sustainable city or compact city. Students will deepen the understanding of urban ecology through the lectures and practices, and acquire knowledge and skills in this field through discussion and information exchanges regarding the latest technology.</p>
Supervised Research on the Environmental Design of Living Space	<p>In order to cultivate the skills in accurately evaluating the relationship between the living environment and the effect of design used for expressing space, students learn to extract elements in space designs by searching literature, performing field survey and analyzing them. Based on the results, students receive training in programming to further acquire knowledge and research capability in the fields of acoustic-environment design analyses, simulation, architectural design, and regional plan.</p>

Subjects	Details
Supervised Research on Environmentally Conscious Materials Engineering	Regarding architectural materials and members of framework, this course deals with environment-conscious materials technology, combination of materials to realize required performance, designing environmental-conscious materials and assessment technique. Students also learn new materials and new structural methods including fiber-reinforced composite materials, advanced materials used in architecture, and exterior thermal insulation using the materials. This course includes environment-conscious design based on rational service life setting from life cycle perspective, meaning longer service life, resource recycling and ecology.
Supervised Research on Trans-Generation Architecture, Design	Securing durability and quake-resistance not only bring us a sense of security and safety, but it is our responsibility for the future generations. Architecture, which has a mission with ethics that transcend generations, is called trans-generation architecture. This course provides basic design tools, structure, and mechanism to realize trans-generational architecture. For students who have already taken trans-generation architecture in the Master course, a further in-depth study program is prepared so that they can acquire deeper knowledge and skills in related study.
Supervised Research on Urban Environmental Engineering	This course provides the latest study themes concerning urban environment engineering to foster students' insight and total awareness based on the basic knowledge referring to technical literature and academic papers. Students select a theme, perform investigative research, and acquire skills in taking the initiative in solving issues. Through this course, students will deepen the understanding of extended problems related to urban environment engineering from diversified perspectives, while conducting research and investigation of the study theme.
Supervised Research on Environmental Engineering in Architecture	Environmental engineering of architecture is indispensable for creating architectural space combining comfort and energy conservation; and the research and technology related to it has been advanced rapidly. This course provides the trend involving advanced research and technology in this field, and architectural environment control system, especially, environmental engineering of architectural heat and air. In this course, the latest papers will be selected and students analyze them in terms of background, purpose, novelty, and originality, then, discuss the academic value and significance.
Supervised Research on Structural Analysis	This course deals with the basic theory of finite element method and primitive equation of structural element and variation principle that provides approximate means referring to the relations with primitive equation of elastic/plastic behaviors, principles of virtual work/complementary virtual work, and the principle of minimum potential energy and unit virtual load method. Students apply these principles to structural elements that receive external forces, obtain basic differential equations that control the behaviors, and examine them. Students also learn approximate methods of analysis for various problems.
Supervised Research on Building Systems and Construction Methods	Building systems refer to the system of building parts and members of framework; construction methods means implementation of the system in construction stages. They change constantly according to the calling of time. Students learned the basics of building systems and construction methods during undergraduate course. This course deals with the essence of the latest building systems and construction methods as well as the change and development of the systems referring to the historical, social, and technological backgrounds.
Supervised Research on Building Facilities Systems	In this course, students learn improvement of indoor living environment (air quality, heat environment), energy conservation, and load leveling of electricity, which have been regarded as issues for practical application in architectural environment and facilities, referring to the actual buildings. Students receive training in planning air-conditioning for given compound or building based on what they have learnt. The class is conducted partially in English using English materials. This course includes numerical exercises as well. Students who have completed "Building Services" in the Master course, a program is prepared for further in-depth study and research.

Subjects	Details
Supervised Research on Building Materials	This course provides the characteristics of concrete material among architectural materials engineering for further in-depth study of dynamic/physical properties of concrete as complex material. Students also learn the latest research trend of concrete technology using waste materials such as coal ash and recycled aggregate, which are actual examples of concrete in enhanced quality. For students who have completed “Advanced Lecture on “Building Materials”, a program is prepared for further in-depth study and research.
Supervised Research on Low Carbon Architecture and Urban Design	In the first series of sessions we will deal with research on low carbon architecture, in the second series, we will search on sustainable urban cities. We will learn how sustainable architecture or cities are designed and realized in actual fields, and understand the importance of planning a unite of blocks or cities in addition to designing a sustainable building. We discuss more deeper aspects of sustainable urban cities, and understand the reasons to pursue the environmental conscious cities and back ground of those cities in many countries all over the world.

【Graduate Programs in Environmental Engineering: Special Research Subjects 】

Subjects	Details
Special Research	The adviser undertakes the task of directing the student to create a doctoral thesis and enhance the student’s capability to perform independent research activity. To be more specific, the adviser, in corporation with the student, sets a special research theme in accordance with the student’s study subject, taking the helm on creating the research plan and method, and gives overall guidance according to the student’s specialized area and study theme.

【 Graduate Programs in Information Engineering, Specialized Subjects 】

Subjects	Details
Advanced Adaptive Signal Processing	Adoptive signal processing that adjusts processing system in the actual hours in accordance with the signals and the system characteristics has become indispensable as signal processing technology. In this course, students learn comparative study of adoptive system design, basic principles of adoptive algorithm, convergence characteristic analysis, and numerical calculation. The course also includes adoptive digital filter, adoptive interference canceller, and applied technology for designing adoptive equalizer to promote further understanding of theoretical principles and practical techniques of adoptive signal processing.
Advanced Visual Information Processing	Optical system of humans is a unique visual information system, which process enormous amount of image data in the three-dimensional space that varies from hour to hour, with adroit methods acquired through the process of evolution, and extract information such as color, form, movement, and depth of objects. This course provides the latest topics regarding research on human optical system. The first through third classes are lectures on the overview of human visions and the rest of the classes are seminars. A student in charge reports the content of one of the latest papers for further discussion in the class.
Advanced Applied Pattern Recognition	This course introduces students to the various pattern-recognition-based applications. In the first part, we provide some fundamental approaches to pattern recognition issues. In the second part, we introduce how to design speech and image recognition systems as the typical examples of pattern recognition applications. Also, we introduce a biometric recognition technology which is being utilized in the field of information security along with recent trends and issues in the pattern recognition field.
Advanced Information Security	This course provides the present situation of information security technology and its future trend. To be more specific, students learn the safety assessment for cryptographic authentication technology based on its mathematical background such as number theory and algebra, and relations with the safety of other technologies. Students will acquire skills in designing cryptographic authentication and in solving problems involving the assessment.
Advanced Image Processing	This course provides a comprehensive study of “Compression coding technology considering the explicit Network streaming”, an important theme in the multimedia technology, with its theory and applications. Students learn the theory of multimedia data structure, color space conversion, and decorrelation of signal by filtering for further practices. Students also receive programming exercises in cosine transformation, wavelet transformation, Huffman coding, and arithmetic coding, which are fundamental technology for JPEG, JPEG2000, and MPEG.
Advanced Mobile Communication Systems	To gain a theoretical understanding of the mobile communication systems, students learn basic mathematics for digital communications technology and wireless communication path, digital modulation/demodulation such as PSK, and theoretical derivation of frequency of errors in the digital communication in the first semester. This course also provides QAM modulation, spread spectrum communication, and OFDM method used for mobile phones and wireless LAN; comparison/investigation of these transmission methods’ frequency of errors in multipath fading transmission path peculiar to mobile communication systems; and communication circuit design in the actual mobile communication systems.

Subjects	Details
Advanced Information and Communication Theory	In order to understand and implement the codes which are so important in transmission and storage of information, not only accuracy but also efficient implementation, such as higher processing speed, are required. Therefore, it is essential to understand algebra as a prerequisite and make full use of the most appropriate features for a particular purpose. In this class, students study finite fields as a means to represent codes and various bases for attaining higher calculation speeds. In particular, they study the composition of polynomial factorization and irreducible polynomial, orthonormal basis and optimal orthonormal basis as reflected in finite fields.
Advanced Combinatorial Optimization	In addressing the problems of discrete structure such as design automation of VLSI, algorithm that solves formation as combinational optimization is usually discussed. This course introduces the concept of calculation amount, the basic of algorithm. Students learn the theories of NP-complete, high in demand for practical application, and i) Approximate means ii) Simulated Annealing, iii) Genetic Algorithm, which are widely used to address the problems belonging to NP-hard.
Advanced VLSI Physical Design	VLSI has become large-scaled mounting several hundred million transistors on one chip, whose design is made possible with accumulated highly automated design. This course, focusing on physical design (layout design) in VLSI design process, provides the latest automated design concerning circuit partitioning, circuit alignment, wiring algorithm, and wiring delay computation.
Advanced Nonlinear Programming	In this class, students discuss the mathematical basis of the further advanced theories of non-linear optimization, applicable for a wide variety of general problems that cannot be dealt with by linear models, and optimality conditions and duality theory making use of bases including constrained optimization. The class content includes general features of optimization algorithms, followed by one-dimensional optimization and basic descent methods in more general frameworks, and then the conjugated direction method and the quasi-Newton method. Also included are quadratic programming and convex optimization with practical applications of optimization methods including VLSI design. The latest techniques such as semi-definite programming, linear conic programming, and second order conic programming are also discussed.
Advanced Applied Control Engineering	Computer controlling in automobiles has been rapidly increasing with the demand for enhanced performance in “running”, “turning”, and “stopping” and environmental problems served as background. This course provides the control of automobiles with the internal combustion engine and hybrid cars equipped with electric motor systems. Students learn: basic dynamics to understand vehicle motions, basic control mathematics to control vehicle motions, and properties of tire, the core of vehicle motions. In addition, they learn two-wheeled vehicle models to analyze vehicle motions, and vehicle models in view of suspension; actuators controlling vehicle motions, basic servo technology applied for driving performance; and engine control, power steering control, and brake control, as examples of vehicle controlling system.
Advanced Sensor Systems Engineering	Information engineering can be established based on a wide range of technology, including device engineering, analog-digital circuit engineering, communication technology, computation technology and digital processing, not to mention information theory. These technologies are supported by metering experiments based on electric and electronic measuring technology, sensor technology and signal processing. This class deals with such areas as the information and communication field and the measurement control field, based on the latest technological background, including current challenges and breakthroughs.

Subjects	Details
Advanced System Control Theory	This course provides the major results of robust system control theory that has been developed since 1980. First, students learn how to describe a model that includes uncertainty as the mathematical model using the partial information of the concerned control; then, based on the uncertain model of the concerned control, they understand how to design robust control system. After that, they create a model that includes uncertainty of the concerned control and simulate the process of robust control system design; finally, they evaluate the results. Through this process, students deepen the understanding of the robust system control theory, practice it, and consider the future development.
Advanced Network Architecture	This course provides systematic knowledge of the function structure within the network utilized for information and telecommunications including the Internet from the viewpoint of architecture. Especially focusing on the network control technology, the course provides explanations on design concepts, principles, and behaviors of communication layer, communications protocol, and path control. Another goal of this course is to deepen students' understanding of next-generation network architecture and network programming. And the ultimate goal is to enable students to acquire ability to design information system on network.
Advanced Medical Engineering	A signal from a living body is taken in actually and the method to estimate an analysis and a way of thinking are learned. It's learned about signal processing variously all together.

【 Graduate Programs in Information Engineering: Special Research Subjects 】

Subjects	Details
Special Research	The adviser undertakes the task of directing the student to create a doctoral thesis and enhance the student's capability to perform independent research activity. To be more specific, the adviser, in corporation with the student, sets a special research theme in accordance with the student's study subject, taking the helm on creating the research plan and method, and gives overall guidance according to the student's specialized area and study theme.

《Faculty Members in the Program and the Main Themes of Research》

※ Course to which faculty members belong may be changed from April 2019.

※ Before applying, you must contact the professor by whom you wish to be supervised.

※ Please consult with the course director if you have a question concerning the faculty member advising you on your research project.

The email addresses of the course directors are as follows:

《Contact》

○Graduate Programs in Environmental Systems

Chemical Processes and Environments	process@kitakyu-u.ac.jp
Environmental Biosystems	biosys@kitakyu-u.ac.jp
Environment and Resources Systems	shigen@kitakyu-u.ac.jp

○Graduate Programs in Environmental Engineering

Mechanical Systems Engineering	kikai@kitakyu-u.ac.jp
Architecture	kenchiku@kitakyu-u.ac.jp

○Graduate Programs in Information Engineering (※common address)

Communications and Media Processing	jyohou@kitakyu-u.ac.jp
Computer Systems	jyohou@kitakyu-u.ac.jp

Graduate Programs in Environmental Systems

Developed countries are facing problems of global warming and resources depletion caused by large amount of energy and resources consumption, while developing countries have the environmental deterioration on the table. Thus, global cooperation that eases or solves these issues is inevitable to achieve sustainable growth for human beings. The objective of Environmental Systems is to give students an overview of the problems related to the resources, energy, the environmental issues to look for the solutions for mutually related problems systematically, while taking advantage of advanced technology such as biotechnology and chemical technology. For conveniences of study, students are classified into three specialized courses: Chemical Processes and Environments, Environmental Biosystems, and Environment and Resources Systems.

【Chemical Processes and Environments】

This course deals with the comprehensive educations and researches on the development of novel chemical monitoring and analysis methods, recovery systems of valuable substances from various resources, removal systems of toxic substances from the environment and innovative energy systems using chemical processes. This course also provides the educations and researches on the development of innovative materials with multi-functions on the basis of chemistry and chemical engineering in wide ranges from nanostructures to macrostructures for realizing the establishment of novel environmental-friendly processes and recycling processes in modern society.

Name	Main Themes of Research
Asami Kenji	Development of synthetic process of new clean fuels using solid catalyst, Development of energy chemistry system using new fuels
Li Xiaohong	Catalytic chemistry, Composition of fuel substitute for petroleum using carbon resources such as biomass
Yoshizuka Kazuharu	Selective recovery system of rare metals from various untapped resources, thorough removal system of toxic substances from the aquatic environments
Nishihama Shohei	1. Separation and recovery process of rare metals from waste materials. 2. Removal process of toxic compounds in water environment.

Name	Main Themes of Research
Amano Fumiaki	Study on photocatalysis and photoelectrochemistry Design of photofunctional materials and catalysts Development of solar-to-chemical energy conversion system
Akiba Isamu	Polymer synthesis/structure/physicality
Lee Seung-Woo	Organic/inorganic nanohybrid layer, Development of high sensitivity sensor using organic/inorganic nanohybrid materials, Development of diagnostic technology and device using odor
Yamamoto Katsutoshi	Synthesis and catalytic application of novel porous materials Development of organic-inorganic hybrid nanoporous materials

【Environmental Biosystems】

This course deals with comprehensive education research regarding environmental engineering related to living organism, ranging from micro biotechnology represented by genetic manipulation, biological catalysts, and functional microbes, to macro biosystem engineering including biomass energy, biochemical material circulation and biotope. Students will be specialized in applying biofunction to environmental restoration and in building a next generation biological environment system in the related fields.

Name	Main Themes of Research
Sakurai Kazuo	Basic study on polysaccharide/DNA complex and its application to gene carriers, Structural analysis of complex materials/nanomaterials using synchrotron X-ray
Uezu Kazuya	Creation of a new-type biosensor by using specific response of organisms, Creation of phosphoprotein separation materials targeting intracellular information path, Design of molecular recognition materials by using computer chemistry, Development of brush fire extinguishant foam largely reducing impact on ecosystem
Haraguchi Akira	Biofunction analysis in ecosystem, Development of greening technology of environmental function, Separation of useful soil microorganism, Development of biological environment assessment methods
Isoda Takaaki	Development of a bio sensor and the application, 1: Food freshness assessment for meat, fish and vegetables, 2: Salivary and urine diagnosis for medical examination
Nakazawa Koji	Development of cell patterning technology and cell microchip, Analyst of culture minimal environment and cell differentiation characteristics
Kawano Tomonori	Biosensing, microrobotics, bioelectronics by using DNA, peptide and cell, Development of vegetable factories technology by using LED and research of environmental response mechanism of plants and microbes
Morita Hiroshi	Physiology of local agricultural products and development of new applications; Bio-control science of mold spores and mites; Study on novel co-culture Koji for Sake brewing; Development of submerged culture system for brewing

【Environment and Resources Systems】

This course provides comprehensive education research to understand environmental impact caused by production activities, regional development, civil life, energy consumption as well as influences of the environment on human beings and social environment; and to acquire capability to understand ecosystem of ground, water and soil, and perform investigation, planning, and design for conservation and restoration of the ecosystem. Students receive training in the fields of fundamental scientific technologies and techniques including environmental preservation engineering, recycling engineering, environmental assessment, environmental restoration technology, and fundamental social science such as environmental policy and international standards. Students also receive practical training in the fields of urban environment management, regional society system, biological conservation system, and global cooperation for the environment using the actual examples such as eco towns.

Name	Main Themes of Research
Ito Yo	Development of soil pollution prevention techniques
Futawatari Toru	Study on regional environmental management system, Comparative study of economical development and environmental issues in East Asia
Nogami Atsushi	Study on environmental simulation and assessment, Study on depletion assessment of infrastructural materials in environment and service life prediction
Matsumoto Toru	Study on design/assessment of urban/social systems for recyclable society, Study on urban environment management in Asia
Kato Takaaki	Economic evaluation of environmental policies, Development of education/exercise methods for social risk management
Ohya Hitoshi	Research on development of recycling technology and assessment of recycling systems
Yasui Hidenari	Environmental technologies for wastewater, sludge and drinking water Biological mathematical modelling
Terashima Mitsuharu	Development of new technologies in water treatment process Studies on model-development and simulation for water treatment system
Aikawa Masahide	Study on air pollution and acid deposition Study on physical and chemical interaction between air pollutants and precipitation

Graduate Programs in Environmental Engineering

Environmental problems have to be solved urgently by calling upon a great amount of expertise. In order to solve today's complex environmental problems, from immediate residential environment to global scale and create rich environment, we need to get hold of the problems with broader perspective and respond to them appropriately. The objective of education of Information Engineering is to give students integrated and intensive education in specialized fields related to "Mechanical System Engineering" and "Architecture" based on the students' accumulated knowledge through research and education, while giving them a flexible training that surpasses the framework of the specialized fields. For conveniences of study, students are classified into two specialized courses: Mechanical Systems Engineering and Architecture.

【Mechanical Systems Engineering】

This course provides perspectives to see Sustainable Development from a viewpoint of both reduction in environmental load and economic development combined and to see environmental improvement as the primal target of their work. Students receive training in the field of building environment-conscious energy system such as effective energy conversion and effective utilization of natural energy, design methods in view of environment, quality, safety, and reliability; and environmental technologies optimized based on the concerning principles. This course provides training for students to become environmental engineers with global perspective, giving them up-to-date information and knowledge, and serves as a place to reeducate adult students as well to meet the growing demand for such engineers.

Name	Main Themes of Research
Izumi Masaaki	Study on enhancing performance and durability of fuel cells, Study on measurement method of fuel cell performance,
Inoue Koichi	Research on improvement in performance of heat exchangers for nuclear power / thermal power generation systems Research on cooling technology for electronic devices
Okada Nobuhiro	Studies about robotics and mechatronics technologies, especially focusing on 3-dimensional visual measurements Development of laser scanner without an actuator Studies on cooperative learning of multiple self-organizing maps
Kiyota Takanori	Study on development and application of safe, energy-saving mechanical system control method Development of power assist systems
Sasaki Takumi	Development of a practical vibration analysis method for a large-scale system Study of a vibration control system for machines and structures
Cho Changhee	Study on biomechanical engineering and biotribology, Study on improvement of clinical longevity and performance of artificial joints
Cho Hiroki	Research on material properties of shape memory alloys. Research and development of the heat-engine using shape memory alloys which is activated by low-temperature exhaust heat energy. Research and development of the actuator and medical equipment using shape memory alloys.
Nakao Shinichiro	Research on applying non-contact measurement techniques to compressible flow fields. Research on methods to soup up small size wind turbines.
Miyazato Yoshiaki	Study on choking phenomenon of compressible internal flow, Study on development of rainbow schlieren deflectometry
Murakami Hiroshi	1. Development of a System for 3-D Micro Metrology Using an Optical Fiber Probe 2. Study on an intelligent machine tool 3. Development of a high-speed air turbine microspindle for monitoring machining processes
Yoshiyama Sadami	Study on development and application of combustion sensing technique using an ion sensor, Study on measurement and modeling of turbulent premixed flame

【Architecture】

This course deals with advanced and sophisticated knowledge and technology concerning environmental space design including residential environment design, environmental space conservation structure, and urban architecture energy system to create and conserve architecture, cities, and regions in the age of global environment, along with related fields. Through this course, students will be specialized in skills in solving problems concerning architecture and regions according to the situation in specialized and comprehensive manners so as to become a designer with technological perspective, or a an engineer having viewpoints of design.

Name	Main Themes of Research
Ryu Yuji	Natural energy utilization in building, Thermal environment and residents' physiology/psychology in elder care facilities
Gao Weijun	Architectural/urban environment Planning/design, Building/city energy and resource planning Study on urban environment in Asia
Fukuda Hiroatsu	Study on architectural design, historical architecture Study on architectural planning, urban planning Study on low carbon architecture, low carbon city
DEWANCKER, Bart Julien	Study on urban planning, Study on architectural design of cities and building, Study on landscape/greening of cities and building
Shiraishi Yasuyuki	Control of thermal and air environment in urban and Architectural spaces Health impact assessment in living environments Total environmental performance assessment of architecture and cities
Takasu Koji	Study on high strength and high durability cement-free concrete Development of high performance concrete with recycled materials Modification of by-products particles for building materials Environmental impact assessment focusing on performance of building materials,
Kido Masae	Seismic design of steel/concrete-filled steel tube structure, Stability design method of steel/concrete-filled steel tube structure
Koyamada Hidehiro	Safety and Health Management on Construction, and Analysis of Accidents in Buildings Maintenance of Buildings, and Reuse of Building Materials Concreting in Hot weather Ambience

Graduate Programs in Information Engineering

In the advanced information society, information communications environment in which diversified multimedia information can be utilized without regard to place, time, or media is necessary. In such an environment, a new value in engineering is being created by designing complex system systematically as well as optimally. The objective of education of Information Engineering is to give students specialized education and research programs in “Communications and Media Processing” and “Computer Systems” so that students will be specialized in designing information communications environment in which humans can naturally deal with multimedia information. For conveniences of study, students are classified into two specialized courses: Communications and Media Processing and Computer Systems.

【Communications and Media Processing】

Human beings and environment are about to be organically connected, even more strongly than ever through “information and communications.” With this basic perspective, this course provides comprehensive education research regarding design of intellectual information and communication systems.

Students receive training in the fields of information communication network, software/security technologies that support the network, multimedia signal processing, audio/image signal processing, and adoptive signal processing. This course provides comprehensive and academic education research such as information communication network and media processing, so that students will become engineers/researchers equipped with basic knowledge and rich ideas who can flexibly address advanced information society.

Name	Main Themes of Research
Sato Masayuki	Clarification of visual information processing mechanism of human beings using psychophysical experimental methods, Space perception characteristic by binocular stereopsis, Research on visual integration mechanism in eye movement
Okuda Masahiro	Study on image engineering and computer vision based on digital signal processing technology, Study on multimedia signal processing by integrated computer graphics
Uehara Satoshi	Information theory, signal theory, information security: Study on configuration method and performance assessment of signals based on mathematical background
Sato Takashi	Information security : Study on cryptographic theory and its applications Future communication networks: Study on distributed systems and internet operations
Yamazaki Yasushi	Research and development of information security and pattern recognition technologies with a focus on biometrics
Nagahara Masaaki	Mathematical informatics including artificial intelligence, automatic control, and machine learning, and its applications to robots, drones, vehicles, audio and image processing, etc.

【Computer Systems】

VLSI system is hardware indispensable for realizing information-processing system that supports advanced information society. With the development of fine processing technology, integration degree in VLSI chips has also been increased and an era of SoC (system on chip) is about to come. Reliable embedded software and control technology secure the effectiveness and safety of embedded system and control system, which are applied system of VLSI computer. This course provides education research of theory and technology for designing VLSI system and embedded system, technology of analysis/design/measurement/control of concerning system, to provide training for students to become engineers and researchers equipped with integrated skills in computer systems and highly advanced knowledge and perspective that cover a wide range of concerning areas. Those who finish this course are expected to achieve great success as design engineer, or production engineer in Kitakyushu district, which is a location of industrial robot related companies, electrical parts makers, automobile industries, and related companies.

Name	Main Themes of Research
Nakatake Shigetoshi	Study on VLSI design technologies and low power technologies of analog and digital mixed signal integrated circuits, and integration technologies of sensor systems in medical / disaster prevention fields.
Takashima Yasuhiro	Study on VLSI design automation technology: physics design methods and their theories for circuit partitioning, alignment/wiring, and clock distribution
Horiguchi Kazumi	Study on realization of linear system and low-dimensional systems, Study on control system design using low-dimension controller, Study on system identification
Son Renmei (Sun Lian Ming)	Research on system identification methodology in building mathematical models in the fields of control and signal processing, Research on control system design and adoptive signal processing
Matsuda Tsuruo	Biological information acquisition, Mechatronics control, cranial magnetic • electrical stimulation Rehabilitation application technology
Sugihara Makoto	Design methodology for VLSI, embedded systems and automotive IT systems

Form 1 (October 2018 Enrollment)

Examinee No.	
(Do not fill in.)	

Personal Resume			
Year:	Month:	Number of Yrs	Academic Records, Employment Records, Research Histories, etc.
From yr:	mo:		Name of Elementary School (Primary Education)
To yr:	mo:		
From yr:	mo:		Name of Junior High School (Secondary Education)
To yr:	mo:		
From yr:	mo:		Name of High School (Secondary Education)
To yr:	mo:		
From yr:	mo:		Name of University, Faculty, Department, Major (Higher Education)
To yr:	mo:		
From yr:	mo:		Name of University, Faculty, Department, Major (Higher Education)
To yr:	mo:		
From yr:	mo:		Name of Graduate School, Programs (Higher Education)
To yr:	mo:		
From yr:	mo:		
To yr:	mo:		
From yr:	mo:		
To yr:	mo:		
From yr:	mo:		
To yr:	mo:		

○ Reserch results, reports, official certifications, etc. that might serve as reference for the future studies.

Yr:	Mo:	Title	Notes (Abstract of the research paper, Name of accreditation organization, etc.)

Form 1 (April 2019 Enrollment)

Examinee No.	
(Do not fill in.)	

Personal Resume			
Year:	Month:	Number of Yrs	Academic Records, Employment Records, Research Histories, etc.
From yr:	mo:		Name of Elementary School (Primary Education)
To yr:	mo:		
From yr:	mo:		Name of Junior High School (Secondary Education)
To yr:	mo:		
From yr:	mo:		Name of High School (Secondary Education)
To yr:	mo:		
From yr:	mo:		Name of University, Faculty, Department, Major (Higher Education)
To yr:	mo:		
From yr:	mo:		Name of University, Faculty, Department, Major (Higher Education)
To yr:	mo:		
From yr:	mo:		Name of Graduate School, Programs (Higher Education)
To yr:	mo:		
From yr:	mo:		
To yr:	mo:		
From yr:	mo:		
To yr:	mo:		
From yr:	mo:		
To yr:	mo:		
From yr:	mo:		
To yr:	mo:		

○ Reserch results, reports, official certifications, etc. that might serve as reference for the future studies.

Yr:	Mo:	Title	Notes (Abstract of the research paper, Name of accreditation organization, etc.)

Form 2

October 2018 / April 2019 Enrollment: The University of Kitakyushu, Graduate School of Environmental Engineering, Doctoral Program, Entrance Examination Test Admission Card

Examinee No. (Do not fill in.)	
Selection Division	Special Selection for International Students
Name	
Program・Course	Graduate Programs in _____ Course
Language used for the test	<input type="checkbox"/> Japanese <input type="checkbox"/> English
	*Check a language used for the test for Architecture.

*** Fill in within the heavy lines only.**

Examination Date	《July 1 (Sun), 2018》	*Confirm the test date when you receive the Test Admission Card. *Do not fill in times on the left by yourself.
Time to Meet	Meet at _____ :	
Time to Start	Start at _____ :	
Test Time	Refer to 5. Examination Subjects and Selection Method (page 5~6 or page 14~15)	
Test Site	The University of Kitakyushu, Hibikino Campus (1-1 Hibikino, Wakamatsu-ku, Kitakyushu-city)	

* The test room will be bulletined at the entrance of the examination site.

Received

*** Keep this Card after the test for the Admission Procedure.**

* [Emergency Contact] The University of Kitakyushu, Administrative Office, Academic Service Department Division II
Entrance Examination Division TEL093-695-3340 E-mail nyushi@kitakyu-u.ac.jp

Form 3

* Photo Card

- Upper body, no hat, no background
- Taken within three months
- Enter your name on the back of the photo and paste it.

Photo Card

Program・Course	Graduate Programs in _____
	Course _____
<div style="border: 1px solid black; width: 150px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <p>Attach photo here</p> </div>	
Name _____	
Examinee No. (Do not fill in.)	

(Doctoral Program)

October 2018 / April 2019 Enrollment: The University of Kitakyushu, Graduate School of Environmental Engineering, Doctoral Program, Address Card

***Choose either Domestic Resident or Overseas Resident and write your address.
Make sure you can receive notices with the address.**

Domestic Resident

<p>Name & Address 1 (an test admission card)</p> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p style="text-align: center;">〒 —</p> <p>Address _____</p> <p>_____</p> <p>Name Mr./Ms _____</p> <p>Examinee No. _____</p> </div>	<p>Name & Address Card 3 (documents concerning enrollment)</p> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p style="text-align: center;">〒 —</p> <p>Address _____</p> <p>_____</p> <p>Name Mr./Ms _____</p> <p>Examinee No. _____</p> </div>
<p>Name & Address Card 2 (a letter of acceptance)</p> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p style="text-align: center;">〒 —</p> <p>Address _____</p> <p>_____</p> <p>Name Mr./Ms _____</p> <p>Examinee No. _____</p> </div>	

Overseas Resident

◆ Name & Address 1 (an test admission card and an examination permit)

Postal Code		TEL	
Address			

◆ Name & Address 2 (a letter of acceptance and documents concerning enrollment)

Postal Code		TEL	
Address			

◆ Name & Address 3 (a confirmation of admission)

Postal Code		TEL	
Address			

October 2018 / April 2019 Enrollment
 The University of Kitakyushu
 Graduate School of Environmental Engineering,
 Doctoral Program

Examinee No. (Do not fill in.)	
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Research Plan Survey

Name	Programs • Course Graduate Programs in ----- Course
University	
Faculty • Major (Graduation • Prospective Graduation Year: Month: Day:)	
Academic Record (Graduation • Prospective Graduation Year: Month: Day:)	

【Fill in the Blanks】

- State the "Research area you want to study" and "Faculty member you want as research supervisor" in the faculty by whom you wish to be instructed after enrollment".
You must contact each course to the mail address indicated on page 32 <<Faculty Members in Program and the Main Themes of Study>> in advance.

Research Area You Want to Study	
Faculty member you want as research supervisor	

【Submission】

- Create and submit a statement of your reason for application following the style stated below.

≪ Form ≫ Free style, a piece of A4 sheet <u>* Write your Name, Programs, and Course.</u>

【Summary】

- State your major, research field at university or graduate school.

Major, Seminar, Research Field at University or Graduate School	
Instructor's Name	

October 2018 / April 2019 Enrollment
 The University of Kitakyushu, Graduate School of Environmental Engineering,
 Doctoral Program: Entrance Qualifications Screening Application

Application Date Year: Month: Day:

Name	
Programs • Course	Programs in Course

※Fill in the form within the heavy lines.

【Documents for Submission】

① Application Form (Form 1)	<input type="checkbox"/>
② Research Plan Survey (Form 5)	<input type="checkbox"/>
The Reason for Application (a piece of A4 sheet, free style)	<input type="checkbox"/>
③ Certificate of Academic Performance from Previous University	<input type="checkbox"/>
④ Details of Previous Performances and Research	<input type="checkbox"/>

【Application Period】

Submit by May 1 (Tue), 2018

【Mail to】

The University of Kitakyushu, Administrative Division, Management office
 Academic Service Department Division II Entrance Examination Division
 1-1 Hibikino, Wakamatsu-ku, Kitakyushu-city 808-0135
 Tel: 093-695-3340 E-mail: nyushi@kitakyu-u.ac.jp

※Received

※Do not fill in here.

<< Access >>

From Fukuoka International Airport to Hibikino Campus

Take subway at "Fukuoka Airport Station"

↓ Fukuoka City Subway Kuko line

Get off at "Hakata Station" (about 5 minutes)

Take JR Kagoshima line from "Hakata Station"

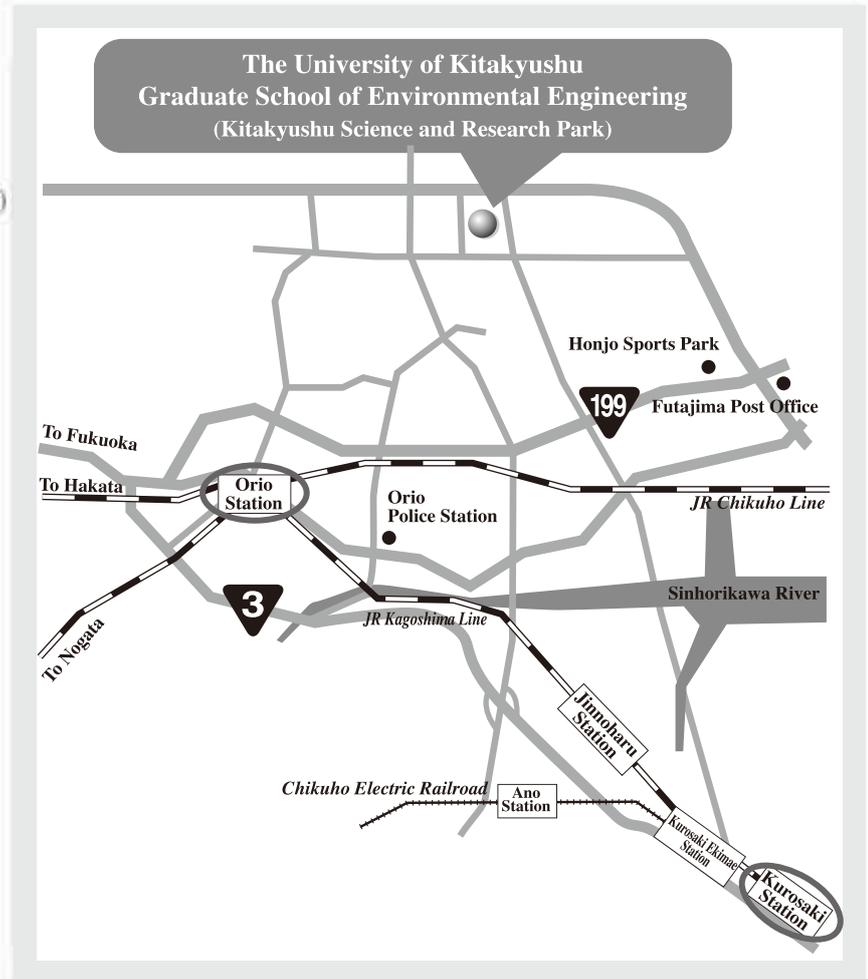
↓ Kagoshima Line (Towards Kokura, Moji, Mojiko, Shimonoseki)

Get off at "Orio Station" (about 30 minutes by limited express, 45 minutes by express)

Get on a Kitakyushu City Bus from

JR Orio-ekinishiguchi (JR Orio Station, West Exit),
bus No.33, 35 or 63 bound for Gakken-toshi
(Kitakyushu Science and Research Park) or bus
No.64 bound for Futajima-eki.

Get off at Gakken-toshi-Hibikino.
(about 20 minutes)

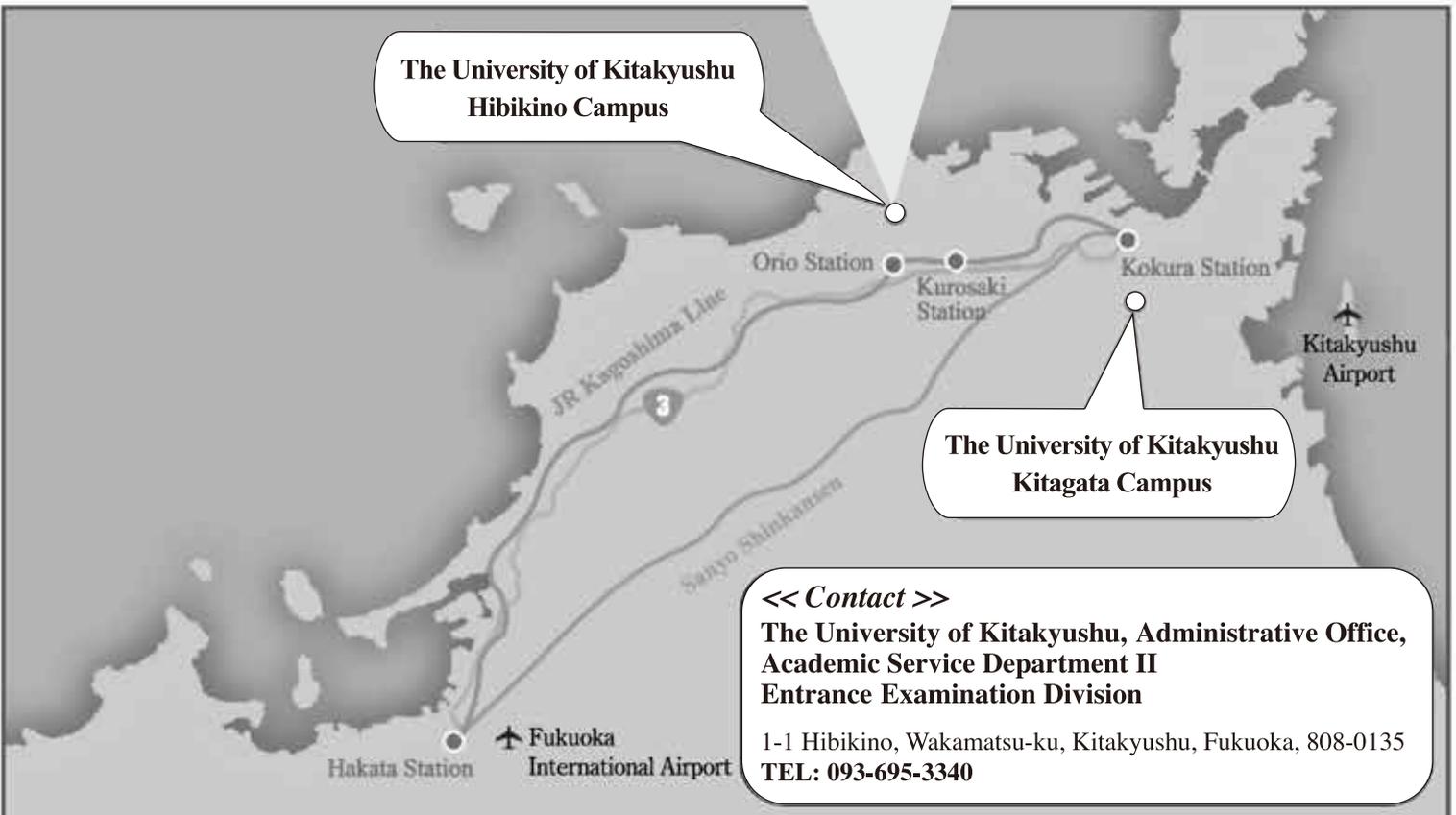


From Kitakyushu Airport to Hibikino Campus

Take Kitakyushu Airport Bus

↓ "Kurosaki-Orio-Hibikino Line"

Get off at "Gakken-toshi-Hibikino" (Final bus stop)
(about 70 minutes)



<< Contact >>

The University of Kitakyushu, Administrative Office,
Academic Service Department II
Entrance Examination Division

1-1 Hibikino, Wakamatsu-ku, Kitakyushu, Fukuoka, 808-0135
TEL: 093-695-3340