Academic Year 2018

Graduate School of Life Science Hokkaido University Division of Life Science Division of Soft Matter

Doctoral Course

(Latter Period of Doctoral Program)

Second Selection

Guidelines for Application for the Entrance Examination

(Admission for International Students Residing in Japan)

November 2017

Schedule for Entrance Examination Graduate School of Life Science 2018

Division of Life Science and Division of Soft Matter

: Doctoral Course (Latter Period of Doctoral Program)

Doctoral Course	Open Division and Course	Examination Date
Second Selection	Division of Life Science Transdisciplinary Life Science Course, Biosystems Science Course, Biomedical and Pharmaceutical Science Course Division of Soft Matter	January 17 – 18, 2018

Hokkaido University's Acquisition and Use of Personal Information

- (1) In handling personal information from applicants, Hokkaido University makes every effort to protect this information through appropriate management based on the "Privacy Policy of Hokkaido University" and relevant laws and ordinances such as the "Protection Law for Private Information Held by Independent Administrative Corporations".
- (2) Personal information, such as name, address, etc., provided by the applicant to the university in the process of applying for admission will be used only for 1) assessment of applicants, 2) the announcement of results, 3) enrollment procedures, 4) surveys and research on enrollee selection methods, and 5) business operations pertaining to 1–4.
- (3) Companies commissioned as part of the relevant operations by the University (hereafter called "commissioned companies") may handle personal data. Part or all of the personal information submitted to the University by the applicant will be provided to the commissioned companies, to the extent necessary for them to carry out their commissioned operations.
- (4) After successful applicants are enrolled, personal information they provided on their application forms will be used for 1) educational affairs (such as registration, educational guidance, etc.), 2) student support services (such as health administration, fellowship applications, etc.), 3) career support and 4) business operations related to their tuition fees and other expenses.
- (5) Among the personal information of (4), only name and address may be used to contact from Hokkaido University Frontier Foundation, Hokkaido University Athletic Union, Alumni Association of the School of Science, Alumni Association of the Faculty of Pharmaceutical Sciences and Alumni Association Elm of Hokkaido University under safety measure.

Admission Policy of Graduate School of Life Science

The Graduate School of Life Science provides students with the training that allows them to acquire an interdisciplinary knowledge of advanced life science, from the level of molecules to organisms. We provide comprehensive education with participation by instructors specialized in fields in the basic and applied life sciences, science, pharmaceutical science, medicine, and agriculture.

<Division of Life Science>

The educational goal of training in the Division of Life Science is to enable students to comprehensively understand various living phenomena through biomolecular interactions, and to apply their knowledge and techniques in real life.

The division welcomes students with exceptional abilities to analyze and examine a subject and strong desire to conduct innovative and original research, and understand;

- Basic structure and functions of living matter such as cellular biology and molecular biology
- Higher biological function such as physiology and developmental biology
- Structure and functions of individual molecules and their constituents
- Diversity and common principles of life phenomena

<Division of Soft Matter>

The Division of Soft Matter seeks students who desire to be capable of integrating material sciences and a wide range of life science and developing soft matter science, understanding the structure and function of living matter from the viewpoint of material science, designing and constructing advanced soft matters and applying those to other fields

The Division especially seeks students who desire to have excellent analytical and discussion skills and to conduct highly original research, such as hierarchy process of soft matters from the microscopic to macroscopic scales and associating principle of dynamic emergent function, designing and constructing advanced soft matter.

General Category

1. Admission Quota

(This includes the admission quota for working and international applicants in each course.)

Division and Course	Admission Quota
Division of Life Science	
Transdisciplinary Life Science Course	22 students
Biosystems Science Course	22 students
Biomedical and Pharmaceutical Science Course	
Division of Soft Matter	3 students

2. Eligible Applicants

Applicants must fulfill one of the following criteria.

- A Received or are expected to receive a Master's degree or a professional degree (a professional degree as stipulated in Article 5-2 of the Degree Regulations [1953 Education Ministry Ordinance No. 9] in conformity with Article 104, Clause 1, of the School Education Law), prior to admission to the Graduate School.
- **B** Received or are expected to receive a degree equivalent to a Master's degree or a professional degree at an overseas institution, prior to admission to the Graduate School.
- C Completed or are expected to complete an overseas distant leaving course in Japan and received a degree equivalent to a Master's degree or a professional degree at an overseas institution, prior to admission to the Graduate School.
- **D** Completed or are expected to complete a school education course at an institution in Japan that is recognized by the educational system of an overseas country as having graduate school courses and is designated by the Ministry of Education, Culture, Sports, Science and Technology, and be awarded a Master's degree or a professional degree, prior to admission to the Graduate School.

- E Received or are expected to receive, prior to admission to the Graduate School, a degree equivalent to a Master's degree from the United Nations University which was promulgated by the General Assembly of the United Nations on December 11, 1972 and in accordance with the Agreement between Japan and the United Nations concerning the Act on Special Measures Incidental to Enforcement of the Agreement between the United Nations and Japan regarding the Headquarters of the United Nations University [1976, Resolution 72, Article 1, Item 2].
- F Completed or are expected to complete a formal education by taking a correspondence course through a non-Japanese university, an educational institution as designated in D, or the United Nations University; passed an examination or screening equivalent to that specified in the regulations in Article 16-2 in Standards for the Establishment of Graduate Schools; and be recognized by the Graduate School as having reached an academic level equivalent to a Master's degree holder, prior to admission to the Graduate School.
- **G** Designated by the Ministry of Education, Culture, Sports, Science and Technology (Ministry of Education Notification No. 118/1989).
- ① Engaged in research at a university and/or a research institute for two years or longer after graduation from university, and be recognized by the Graduate School as having reached an academic level equivalent to or higher than that of a Master's degree holder, based on research results.
- ② Completed a 16-year overseas school education course, or an overseas correspondence course in Japan equivalent to a 16-year school education course in the country concerned, and subsequently engaged in research at a university and/or a research institute for two years or longer, and be recognized by the Graduate School as having reached an academic level equivalent to or higher than that of a Master's degree holder, based on research results.
- **H** Be recognized by the Graduate School as having reached an academic level equal to or higher than that of a Master's degree holder or a professional degree holder, as verified by the individual admission qualification screening, and be at least age 24 before admission to the Graduate School.

3. Pre-assessment of Applicants' Qualifications

Application Period for Pre-assessment: November 22 – November 27, 2017

The Pre-assessment of Applicants' Qualifications is held prior to the application period for the entrance examination. Applicants under G or H in "2. Eligible Applicants" must apply for this by submitting "5. Application Documents" during the above period.

Applicants who apply for the Pre-assessment of Applicants' Qualifications should not pay the entrance examination fee when they apply for the pre-assessment. They should pay the entrance examination fee after referring to the notes below. The Graduate School Educational Affairs Section is open from $9:00 \, \text{AM} - 4:00 \, \text{PM}$, except on Saturdays, Sundays, and national holidays; if you mail the documents, they must be received by the deadline.

Notes:

The pre-assessment application results will be sent to applicants around November 30, 2017, by mail; once their qualifications have been accepted by the pre-assessment, applicants must pay the examination fee, referring to "7. Entrance Examination Fee," and submit the payment certificate by December 15, 2017. If the Educational Affairs Section does not receive the payment certificate during the application period, the application will not be accepted and will be regarded as cancel.

Japanese Government (MEXT) scholarship students, students in the State-Sponsored Scholarship Program of the China Scholarship Council, and students having a Hokkaido University President's Fellowship or a Hokkaido University Special Grant for International Students (including those who are expected to receive these scholarships) are not required to pay the examination fee.

4. Application Period

Application Period: December 11 - December 15, 2017

The Graduate School Educational Affairs Section is open from 9:00 AM – 4:00 PM, except on Saturdays, Sundays, and national holidays; if you mail the application documents, they must be received by the deadline.

Applicants under A – F in "2. Eligible Applicants"

Submit "5. Application Documents" with the payment certificate (E) during the application period. Japanese Government (MEXT) scholarship students, students in the State-Sponsored Scholarship Program of the China Scholarship Council, and students having a Hokkaido University President's Fellowship or a Hokkaido

University Special Grant for International Students (including those who are expected to receive these scholarships) are not required to pay the examination fee.

Please refer to "7. Entrance Examination Fee" for more details.

Applicants under G or H in "Eligible Applicants"

Please refer to "3. Pre-assessment of Applicants' Qualifications" for details.

5. Application Documents

- * Applicants under G or H in "2. Eligible Applicants" must submit the following documents during the application period for "3. Pre-assessment of Applicants' Qualifications."

 * In the following chart, "○" indicates documents that must be submitted; "△" indicates documents
- that must be submitted for those who fall into the following "Remarks".

Documents		Applicants			
		A, B C, D E, F	G, H	Remarks	
1	Application Form, Resume, Admission Ticket and Photo Card.	0	0	Prescribed. Applicants who have completed a correspondence course offered by an overse educational institution or an overseas school education course are required attach Resume B .	
2	Research Plan after enrollment.	0	0	Prescribed.	
3	Certificate of Research Career.		0	Discretionary format. Certificate issued by a dean, department chair or supervisor at a university, institution, or company concerning the applicant's research topics and period of research.	
4	Official Transcript issued by the last academic institution previously attended.	0	0	Applicants from the Master's Course in the Graduate School of Life Science, Hokkaido University, are not required to submit this document.	
5	Official Certificate of Graduation or Expected Graduation issued by the last academic institution previously attended, or Official Certificate of Degree.	0	0	Applicants from the Master's Course in the Graduate School of Life Scien Hokkaido University, are not required to submit this document. Applicants under F in "2. Eligible Applicants" are required to submit Official Certificate of Qualifying Examination.	
6	Summary of research during the Master's Course.	\triangle		Only for applicants for the Biomedical and Pharmaceutical Science Course and who are expected to complete a Master's Course (about three A-4 size pages).	
7	Summary of research up to the present time.	Δ		Only for applicants for the Biomedical and Pharmaceutical Science Course and who hold a Master's degree. Consult with prospective supervisors in advance.	
8	List of preferred supervisors.	0	0	Prescribed. Directly contact supervisors you prefer in advance.	
9	Summary of research experience and copies of research papers.	Δ	Δ	Discretionary format. As proof of their research experience and achievements, applicants may submit these supporting documents.	
10	Self-addressed envelope to receive the admission ticket for the entrance examination.	0	0	Prescribed. Write your name and mailing address on an envelope with a 362-yen stamp attached. If you change your address after applying, please notify the Graduate School Educational Affairs Section, Science and Life Science Administration Department, Hokkaido University.	

		Applicants			
	Documents		A, B C, D E, F	G, H	Remarks
	11	Stickers for notification of the application results and for communication purposes.	0	0	Prescribed. Write your name and mailing address on each sticker. If you change your address after applying, please notify the Graduate School Educational Affairs Section, Science and Life Science Administration Department, Hokkaido University.
	12	Self-addressed envelope for notification of the pre-assessment results.		0	Write your name and mailing address on a standard envelope with an 82-yen stamp attached.

6. Submission of Application Documents

To: Graduate School Educational Affairs Section Science and Life Science Administration Department Hokkaido University Kita-10 Nishi-8, Kita-ku, Sapporo 060-0810, Japan

If you send your application documents by mail, please indicate "Application for Graduate School Enclosed" in red on the envelope and send it by registered mail.

7. Entrance Examination Fee: 30,000 yen

- (1) Applicants expecting to complete a Master's Course in the Graduate School of Hokkaido University, Japanese Government* (MEXT) scholarship students, students in the State-Sponsored Scholarship Program of the China Scholarship Council, and students having a Hokkaido University President's Fellowship or a Hokkaido University Special Grant for International Students (including those who are expected to receive these scholarships) are not required to pay the examination fee.
- * MEXT scholarship students recommended by universities other than Hokkaido University are required to submit a copy of a letter verifying that they have received this scholarship.
- (2) Remit the examination fee to the bank account or post office account designated by this University, using the payment slip for the entrance examination fee which is enclosed with the application forms, and attach the payment certificate to the appropriate section on the application form.
- (3) The examination fee is not refundable except the following cases:
 - The applicant has not submitted an application, or the application was rejected after the examination fee was remitted.
 - The applicant paid the examination fee twice by mistake.

8. Screening Method

The Graduate School will assess applicants on the basis of their oral examination* and on their application documents.

* In the oral examination, applicants are questioned on their "Research Plan after enrollment" and documents submitted as optional extras, such as the summary of research experience or copies of research papers.

9. Date & Time and Place of Examination

Date & Time: January 17 or January 18, 2018

Place: Graduate School of Life Science, Hokkaido University

* The Graduate School will send applicants detailed information on the entrance examination.

10. Announcement of Application Results

Successful applicants will be announced on the bulletin board on the ground floor of the Graduate School of Science (large lobby inside north entrance to Building 2) and in the entrance hall in the Graduate School of Pharmaceutical Science, Hokkaido University, around 4:30 PM on January 25, 2018. All applicants will also receive the results by mail.

Also, the examinee's number will be posted on the Web site of the Graduate School of Life Science, Hokkaido University.

11. Procedures for Enrollment and Fees*

All successful applicants will be notified how to proceed with enrollment registration.

Enrollment Fee: 282,000 yen (estimated).

* Applicants expecting to complete a Master's Course in the Graduate School of Hokkaido University are not required to pay the enrollment fee.

Tuition Fee: 267,900 yen.

[For the first semester. Total annual tuition fee = 535,800 yen] (estimated).

* Tuition fees are subject to revision at the time of or during your enrollment. In the event of a revision, the revised amounts are immediately applied.

12. Precautions

- (1) Make sure to bring your admission ticket for the entrance examination on the day of examination.
- (2) Please consult with the Graduate School Educational Affairs Section in advance if you will have physical difficulties in taking the examination.

13. Long-term Graduate System

The Long-term Graduate System is an option in the Graduate School of Life Science. If you wish to take advantage of this system, please apply after referring to "Information on the Long-term Graduate System".

14. Other Information

The admission ticket for the entrance examination will be sent to all applicants around January 5,2018.

If you have any questions regarding the application procedure, please contact the following:

Graduate School Educational Affairs Section

Science and Life Science Administration Department Hokkaido University

Kita-10 Nishi-8 Kita-ku, Sapporo 060-0810, Japan

E-mail: r-gakuin@sci.hokudai.ac.jp

Graduate School of Life Science, Hokkaido University

http://www.lfsci.hokudai.ac.jp/en/

II. Special Category for Working-Adult Applicants

1. Admission Quota

Division and Course	Admission Quota
Division of Life Science	
Transdisciplinary Life Science Course	A few students
Biosystems Science Course	A few students
Biomedical and Pharmaceutical Science Course	
Division of Soft Matter	A few students

2. Eligible Applicants

Applicants who meet one of the following requirements and who are working as a researcher or technician in a research institution, educational institution, or company at the time of application, and who will continue the position after enrollment.

- A Received a Master's degree or a professional degree (a professional degree as stipulated in Article 5-2 of the Degree Regulations [1953 Education Ministry Ordinance No. 9] in conformity with Article 104 Clause 1 of the School Education Law).
- B Received a degree equivalent to a Master's degree or a professional degree at an overseas institution.
- C Completed an overseas correspondence course in Japan and received a degree equivalent to a Master's degree or a professional degree at an overseas institution.
- **D** Completed a school education course at an institution in Japan that is recognized by the educational system of an overseas country as having graduate school courses and is designated by the Ministry of Education, Culture, Sports, Science and Technology, and was awarded a Master's degree or a professional degree.
- E Received or are expected to receive, prior to admission to the Graduate School, a degree equivalent to a Master's degree from the United Nations University which was promulgated by the General Assembly of the United Nations on December 11, 1972 and in accordance with the Agreement between Japan and the United Nations concerning the Act on Special Measures Incidental to Enforcement of the Agreement between the United Nations and Japan regarding the Headquarters of the United Nations University [1976, Resolution 72, Article 1, Item 2].
- **F** Completed or are expected to complete a formal education by taking a distant leaving course through a non-Japanese university, an educational institution as designated in D, or the United Nations University; passed an examination or a screening equivalent to that specified in the regulations in Article 16-2 in Standards for the Establishment of Graduate Schools; and be recognized by the Graduate School as having reached an academic level equivalent to a Master's degree holder, prior to admission to the Graduate School.
- **G** Designated by the Ministry of Education, Culture, Sports, Science and Technology (Ministry of Education Notification No. 118/1989).
- ① Engaged in research at a university and/or a research institute for two years or longer after graduation from university, and be recognized by the Graduate School as having reached an academic level equivalent to or higher than that of a Master's degree holder, based on research results.
- ② Completed a 16-year overseas school education course, or an overseas correspondence course in Japan equivalent to a 16-year school education course in the country concerned, and subsequently engaged in research at a university and/or a research institute for two years or longer, and be recognized by the Graduate School as having reached an academic level equivalent to or higher than that of a Master's degree holder, based on research results.
- **H** Be recognized by the Graduate School as having reached an academic level equal to or higher than that of a Master's degree holder or a professional degree holder, as verified by the individual admission qualification screening, and be at least age 24 before admission to the Graduate School.

3. Pre-assessment of Applicants' Qualifications

Application Period for Pre-assessment: November 22 - November 27, 2017

The Pre-assessment of Applicants' Qualifications is held prior to the application period for the entrance examination. Applicants under G or H in "2. Eligible Applicants" must apply for this by submitting "5. Application Documents" during the above period.

Applicants who apply for the Pre-assessment of Applicants' Qualifications should not pay the entrance examination fee when they apply for the pre-assessment. They should pay the entrance examination fee after referring to the notes below. The Graduate School Educational Affairs Section is open from $9:00 \, \text{AM} - 4:00 \, \text{PM}$, except on Saturdays, Sundays, and national holidays; if you mail the documents, they must be received by the deadline.

Notes:

The pre-assessment application results will be sent to applicants around November 30, 2017, by mail; once their qualifications have been accepted by the pre-assessment, applicants must pay the examination fee, referring to "7. Entrance Examination Fee," and submit the payment certificate by December 15, 2017. If the Educational Affairs Section does not receive the payment certificate during the application period, the application will not be accepted and will be regarded as canceled.

Japanese Government (MEXT) scholarship students, students in the State-Sponsored Scholarship Program of the China Scholarship Council, and students having a Hokkaido University President's Fellowship or a Hokkaido University Special Grant for International Students (including those who are expected to receive these scholarships) are not required to pay the examination fee.

4. Application Period

Application Period: December 11 – December 15, 2017

The Graduate School Educational Affairs Section is open from 9:00 AM – 4:00 PM, except on Saturdays, Sundays, and national holidays; if you mail the application documents, they must be received by the deadline.

Applicants under A – F in "2. Eligible Applicants"

Submit "5. Application Documents" with the payment certificate (E) during the application period. Japanese Government (MEXT) scholarship students, students in the State-Sponsored Scholarship Program of the China Scholarship Council, and students having a Hokkaido University President's Fellowship or a Hokkaido University Special Grant for International Students (including those who are expected to receive these scholarships) are not required to pay the examination fee.

Please refer to "7. Entrance Examination Fee" for more details.

Applicants under G or H in "Eligible Applicants"

Please refer to "3. Pre-assessment of Applicants' Qualifications" for details.

5. Application Documents

- * Applicants under G or H in "2. Eligible Applicants" must submit the following documents during the application period for "3. Pre-assessment of Applicants' Qualifications."
- * In the following chart, " \bigcirc " indicates documents that must be submitted; " \triangle " indicates documents that must be submitted for those who fall into the following "Remarks".

Documents		Applicants			
		A, B C, D E, F	G, H	Remarks	
1	Application Form, Resume, Admission Ticket and Photo Card.	0	0	Prescribed. Applicants who have completed a correspondence course offered by an overseas educational institution or an overseas school education course are required to attach Resume B .	

Documents		Applicants		
		A, B C, D E, F	G, H	Remarks
2	Certificate of employment issued by a person with authority over personnel administration in the applicant's workplace.	0	0	Discretionary format. Successful applicants are required to submit written consent (to enroll in the Doctoral Course while continuing their employment) issued by this person, so please obtain consent in advance.
3	Research Plan after enrollment.	0	0	Prescribed.
4	Certificate of Research Career.		0	Discretionary format. Certificate issued by a principal or supervisor at a university, institution, or company concerning the applicant's research topics and period of research.
5	Official Transcript issued by the last academic institution previously attended.	0	0	Applicants from the Master's Course in the Graduate School of Life Science, Hokkaido University, are not required to submit this document.
6	Official Certificate of Graduation or Expected Graduation issued by the last academic institution previously attended, or Official Certificate of Degree.	0	0	 ① Applicants from the Master's Course in the Graduate School of Life Science, Hokkaido University, are not required to submit this document. ② Applicants under F in "2. Eligible Applicants" are required to submit an Official Certificate of Qualifying Examination.
7	Summary of research during the Master's Course	Δ		Only for applicants for the Biomedical and Pharmaceutical Science Course and who are expected to complete a Master's Course (about three A-4 size pages).
8	Summary of research up to the present time.	Δ		Only for applicants for the Biomedical and Pharmaceutical Science Course and who hold a Master's degree. Consult with prospective supervisors in advance.
9	List of preferred supervisors.	0	0	Prescribed. Directly contact supervisors you prefer in advance.
10	Summary of research experience and copies of research papers.	Δ	Δ	Discretionary format. As proof of their research experience and achievements, applicants may submit these supporting documents.
11	Recommendation letter(s) issued by a principal or supervisor at a university, institution, or company previously attended.	Δ	Δ	Discretionary format. Applicants may submit as optional extras.
12	Self-addressed envelope to receive the admission ticket for the entrance examination.	0	0	Prescribed. Write your name and mailing address on an envelope with a 362-yen stamp attached. If you change your address after applying, please notify the Graduate School Educational Affairs Section, Science and Life Science Administration Department, Hokkaido University.
13	Stickers for notification of the application results and for communication purposes.	0	0	Prescribed. Write your name and mailing address on each sticker. If you change your address after applying, please notify the Graduate School Educational Affairs Section, Science and Life Science Administration Department, Hokkaido University.
14	Self-addressed envelope for notification of the pre-assessment results.		0	Write your name and mailing address on a standard envelope with an 82-yen stamp attached.

For 6-14, please see the "General Category."

- 6. Submission of Application Documents
- 7. Entrance Examination Fee
- 8. Screening Method
- 9. Date & Time of Examination
- 10. Announcement of Application Results
- 11. Procedures for Enrollment Registration and Fees
- 12. Precautions
- 13. Long-term Graduate System
- 14. Other Information

If you have any questions regarding the application procedure, please contact the following:

Graduate School Educational Affairs Section

Science and Life Science Administration Department Hokkaido University

Kita-10 Nishi-8 Kita-ku, Sapporo 060-0810, Japan

E-mail: r-gakuin@sci.hokudai.ac.jp

Graduate School of Life Science, Hokkaido University

http://www.lfsci.hokudai.ac.jp/en/

Information on the Long-term Graduate System

1. Aims of the Long-term Graduate System

Under the Long-term Graduate System, a student can request an individual review by the graduate school and be accepted to complete a course in a planned manner within a period longer than the regular course term (3 years), for certain reasons such as responsibilities of work, or child and family care.

2. Intended Students

Applicants fulfilling one of the criteria below, who want to set a period of study in advance longer than the regular course term to complete an academic (research) course.

- (1) Have a full-time job in a public office or company (excluding people who are exempt from job duty but receive a salary), or are self-employed.
- (2) Have a part-time job that makes it stressful to engage in full-time academic work.
- (3) Are taking care of children or other family members, which makes it stressful to engage in full-time academic work.
- (4) Are visually impaired, hearing impaired, physically handicapped or other disorder, which are deemed to have serious effects on study over the long term due to the obstacles.

3. Attendance Period

The attendance period for the Long-term Graduate System is up to 6 years, and a student can apply for the system by the year.

Also, students who are permitted to take long-term graduate system can be enrolled for up to 6 years.

Students can also take a temporary leave of absence from school for up to 3 years.

4. Procedures for Applying for Long-term Graduate Status

(1) Application Period

Please submit complete application documents for the Long-term Graduate System and for the entrance examination together.

- (2) Required Documents
 - ① Application Form for Long-term Graduate System (Form 1).
 - ② Research Plan Under Long-term Graduate System (Form 2).
 - ③ Documents that prove that an applicant needs to complete an academic course under the Long-term Graduate System (discretionary format).
- (3) Announcement of Application Results

The Graduate School individually assesses each application for Long-term Graduate Status, and will notify the results to all the successful applicants of the entrance examination.

5.Annual Tuition Fee

The annual tuition fee is determined by the calculation below for every year of the term.

Annual tuition fee as		Annual tuition fee for	Regular course term (3 years)		
a Long-term Graduate Student	=	his/her attending y	/ear	×	Period of his/her accepted Long-term Course (years)

6. Other Information

For the details regarding the Long-term Graduate System and request for application documents, please contact the Graduate School Educational Affairs Section, Science and Life Science Administration Department, Hokkaido University.